CMT-EX5

SERVICE MANUAL

Ver 1.0 2002. 05

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model

- CMT-EX5 is composed of following model.
  As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME

COMPACT DISC DECK RECEIVER SYSTEM	HCD-EX5
SPEAKER SYSTEM	SS-CEX5

- Abbreviation
  CND : Canadian model.
  HK : Hong Kong model.
  KR : Korea model.
  MX : Mexican model.
  SP : Singapore model.
  TW : Taiwan model.

PARTS LIST

	Part No.	Description	Remarks
		ACCESSORIES	
		**********	
	1-477-277-11	REMOTE COMMANDER (RM-SCEX5)	
	1-501-659-41	ANTENNA (FM) (EXCEPT AEP,UK,KR)	
⚠	1-569-008-11	ADAPTOR, CONVERSION 2P (SP,TW)	
	1-754-149-11	LOOP ANT (AM)	
	1-754-248-11	ANTENNA (FM) (AEP,UK,KR)	
⚠	1-770-019-51	ADAPTOR, CONVERSION PLUG 3P (UK,HK)	
	1-816-589-11	PIN, CONNECTOR (FOR CODE RELAY)	
	1-824-307-11	CODE, CONNECTION (FOR SPEAKER CODE EXTEND)	
	4-241-375-11	MANUAL, INSTRUCTION (ENGLISH)	(EXCEPT MX,KR)
	4-241-375-21	MANUAL, INSTRUCTION (FRENCH) (CND)	
	4-241-375-31	MANUAL, INSTRUCTION (FRENCH,SPANISH)	(AEP,SP,MX)
	4-241-375-41	MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN,POLISH) (AEP)	
	4-241-375-51	MANUAL, INSTRUCTION (CHINESE) (SP,HK,TW)	
	4-241-375-61	MANUAL, INSTRUCTION (KOREAN) (KR)	
	4-241-377-11	MANUAL, INSTRUCTION (DANISH,FINNISH) (AEP)	
	4-241-377-21	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	
	4-241-379-11	MANUAL, INSTRUCTION (GREEK) (AEP)	
	4-241-379-21	MANUAL, INSTRUCTION (HUNGARIAN,CZECH) (AEP)	
	4-241-379-31	MANUAL, INSTRUCTION (TURKISH) (AEP)	
	4-241-379-41	MANUAL, INSTRUCTION (SLOVAK) (AEP)	
	4-236-290-01	COVER,BATTERY (FOR RM-SCEX5)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

MICRO HI-FI COMPONENT SYSTEM

9-874-030-01
2002E1600-1
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Home Audio Company
Published by Sony Engineering Corporation

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REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002.05	New

HCD-EX5

SERVICE MANUAL

Ver 1.1 2003. 12

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model

This set is the tuner, CD and amplifier section in CMT-EX5

CD SECTION	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM71C-31BD63A
	Base Unit Type	BU-31BD63A

SPECIFICATIONS

Amplifier section

For the U.S. model

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 4 ohms loads, both channels driven, from 120 - 10,000 Hz; rated 12 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milli watts to rated output.

North American model:

Continuous RMS power output (Reference): 15 + 15 W (4 ohms at 1 kHz, 10% THD)

European model:

DIN power output (Rated): 12 + 12 W (4 ohms at 1 kHz, DIN)

Continuous RMS power output (Reference): 15 + 15 W (4 ohms at 1 kHz, 10% THD)

Music power output (Reference): 15 + 15 W

Other models:

The following measured at 220 V AC, 60 Hz

DIN power output (Rated): 12 + 12 W (4 ohms at 1 kHz, DIN, 110 V – 240 V AC)

Continuous RMS power output (Reference): 15 + 15 W (4 ohms at 1 kHz, 10% THD, 110 V – 240 V AC)

Inputs

PC/TAPE/MD IN (stereo mini jack): voltage 450 mV (MD)/ 250 mV (PC/TAPE), impedance 47 kilohms

Outputs

PC/TAPE/MD OUT (stereo mini jack): voltage 250 mV, impedance 1 kilohm

PHONES (stereo mini jack): accepts headphones with an impedance of 8 ohms or more

OPTICAL CD DIGITAL OUT (Supported sampling frequency: 44.1 kHz)

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ = 795 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	
North American model:	87.5 – 108.0 MHz (100-kHz step)
Other models:	87.5 – 108.0 MHz (50-kHz step)
Antenna	FM wire antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
Pan-American model:	530 – 1,710 kHz (with the interval set at 10 kHz) 531 – 1,710 kHz (with the interval set at 9 kHz)
European model:	531 – 1,602 kHz (with the interval set at 9 kHz)
Other models:	530 – 1,710 kHz (with the interval set at 10 kHz) 531 – 1,602 kHz (with the interval set at 9 kHz)
Antenna	AM loop antenna, external antenna terminal
Intermediate frequency	450 kHz

— Continued on next page —

MICRO Hi-Fi COMPONENT SYSTEM

9-874-036-02
2003L16-1
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General

Power requirements	
North American model:	120 V AC, 60 Hz
European model:	230 V AC, 50/60 Hz
Mexican model:	120 V AC, 60 Hz
Australian model:	220 – 240 V AC, 50/60 Hz
Korean model:	220 V AC, 60 Hz
Chinese model:	220 V AC, 50/60 Hz
Other models:	110 – 240 V AC, 50/60 Hz
Power consumption	
European model:	See the nameplate 0.25 W (at the Power Saving Mode)
Other models:	See the nameplate
Dimensions (w/h/d)	Approx. 186 × 235 × 157 mm incl. projecting parts and controls
Mass	Approx. 3.0 kg

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

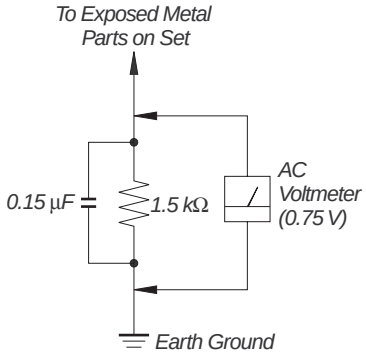

Fig. A. Using an AC voltmeter to check AC leakage.

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

This caution label is located inside the unit.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

与安全有关的零部件须知

在原理图上用阴影及⚠标记来识别的零部件在安全操作上是具有关键性的。这些零部件要用本手册中所示的部件号对应的索尼零部件进行更换。

在安全操作上具有关键性的电路调整与索尼公司出版的维修手册完全一致。在更换关键零部件时或怀疑动作失常时，请进行这些调整操作。

SECTION 2
GENERAL

This section is extracted from instruction manual.

Main unit

ALPHABETICAL ORDER

A – Q

Disc slot 2 (23)
Display window 4
DISPLAY 11 (16, 19, 20)
FUNCTION 10 (9 - 13, 15, 22, 24)

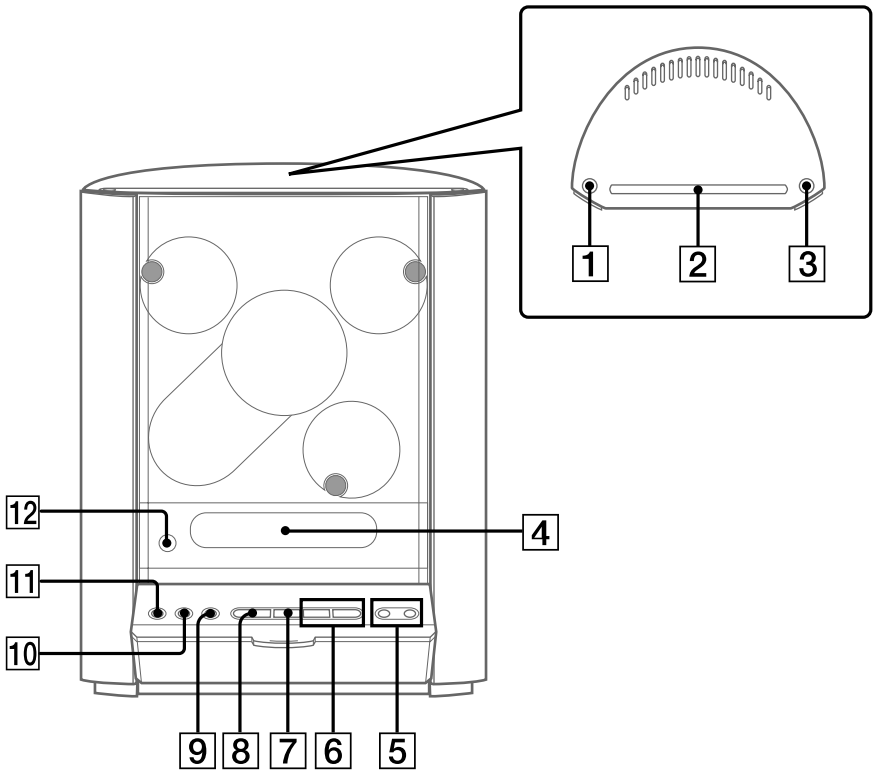
R – Z

Remote sensor 12
TUNER/BAND 9 (13 - 15, 24)
TUNING +/– 6 (13 -15)
VOLUME +/– 5 (18)

BUTTON DESCRIPTIONS

I/⏻ (power) 1
⏏ 3
⏮/⏭ 6
◀◀/▶▶ 6
■ 7
▶II 8

To open the front cover, push down on the knob under the display window.



Remote control

ALPHABETICAL ORDER

A – K

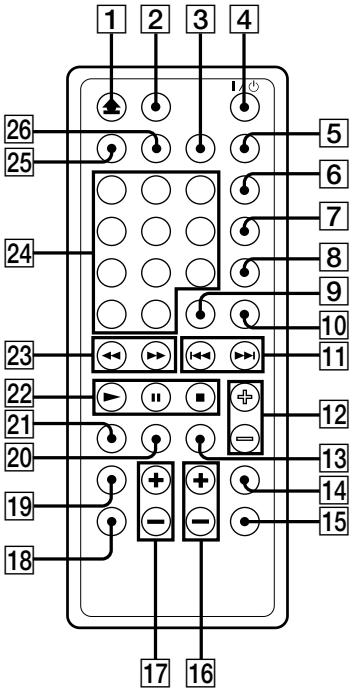
BASS +/– 17 (17)
CD ► 22 (9 - 11, 23)
CLEAR 9 (10 - 12, 16)
CLOCK/TIMER SELECT 6 (19)
CLOCK/TIMER SET 7 (8, 18)
CURSOR ←/→ 23 (8, 12)
DIMMER 18 (19)
DISPLAY 25 (16, 19, 20)
DSG 14 (17)
ENTER/YES 8 (8, 10, 12 - 14, 16, 18, 19, 22)
FM MODE 13 (15, 24)
FUNCTION 19 (9 - 13, 15, 22, 24)

L – Z

Letter/Number buttons 24 (10, 12, 15)
MENU/NO 10 (12 - 14, 16, 22)
NAME EDIT/SELECT 3 (11, 16)
PLAY MODE 20 (9 - 11, 13, 23, 25)
REPEAT 13 (10)
SCROLL 5 (12, 20)
SLEEP 2 (17)
SURROUND 15 (17)
TIME 26 (11, 20)
TREBLE +/– 16 (17)
TUNER BAND 21 (13 -15)
TUNING MODE 20 (13 - 15)
VOL +/– 12 (18)

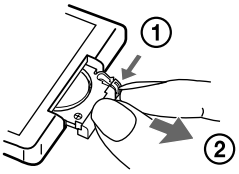
BUTTON DESCRIPTIONS

⏏ 1
I/⏻ (power) 4
⏮/⏭ 11
+/– 11
⏸ 22
■ 22
◀◀/▶▶ 23



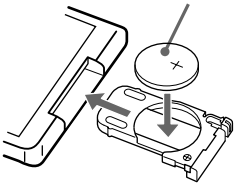
Replacing the battery in the remote

1 **Slide out and remove the battery case.**



2 **Insert a new lithium battery CR2025 with the + side facing up.**

A lithium battery CR2025



3 **Slide the battery case back in.**

Tip

When the remote no longer operates the system, replace the battery with a new one.

Note

If you do not use the remote for a long period of time, remove the battery to avoid possible damage from battery leakage and corrosion.

Notes on lithium battery

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.

WARNING

Battery may explode if you mistreated.
Do not recharge, disassemble or dispose of in fire.

Setting the clock

1 **Turn on the system.**

2 **Press CLOCK/TIMER SET on the remote.**

The day indication flashes.

3 **Press I◄◄ or ►►I on the remote repeatedly to set the day, then press ENTER/YES on the remote.**

The hour indication flashes.

4 **Press I◄◄ or ►►I on the remote repeatedly to set the hour, then press ENTER/YES on the remote.**

The minute indication flashes.

5 **Press I◄◄ or ►►I on the remote repeatedly to set the minuite, then press ENTER/YES on the remote.**

If you made a mistake

Press ←CURSOR or CURSOR→ on the remote repeatedly until the indication you want to change (day, hour, minuite) flashes, and then change the setting.

To adjust the clock

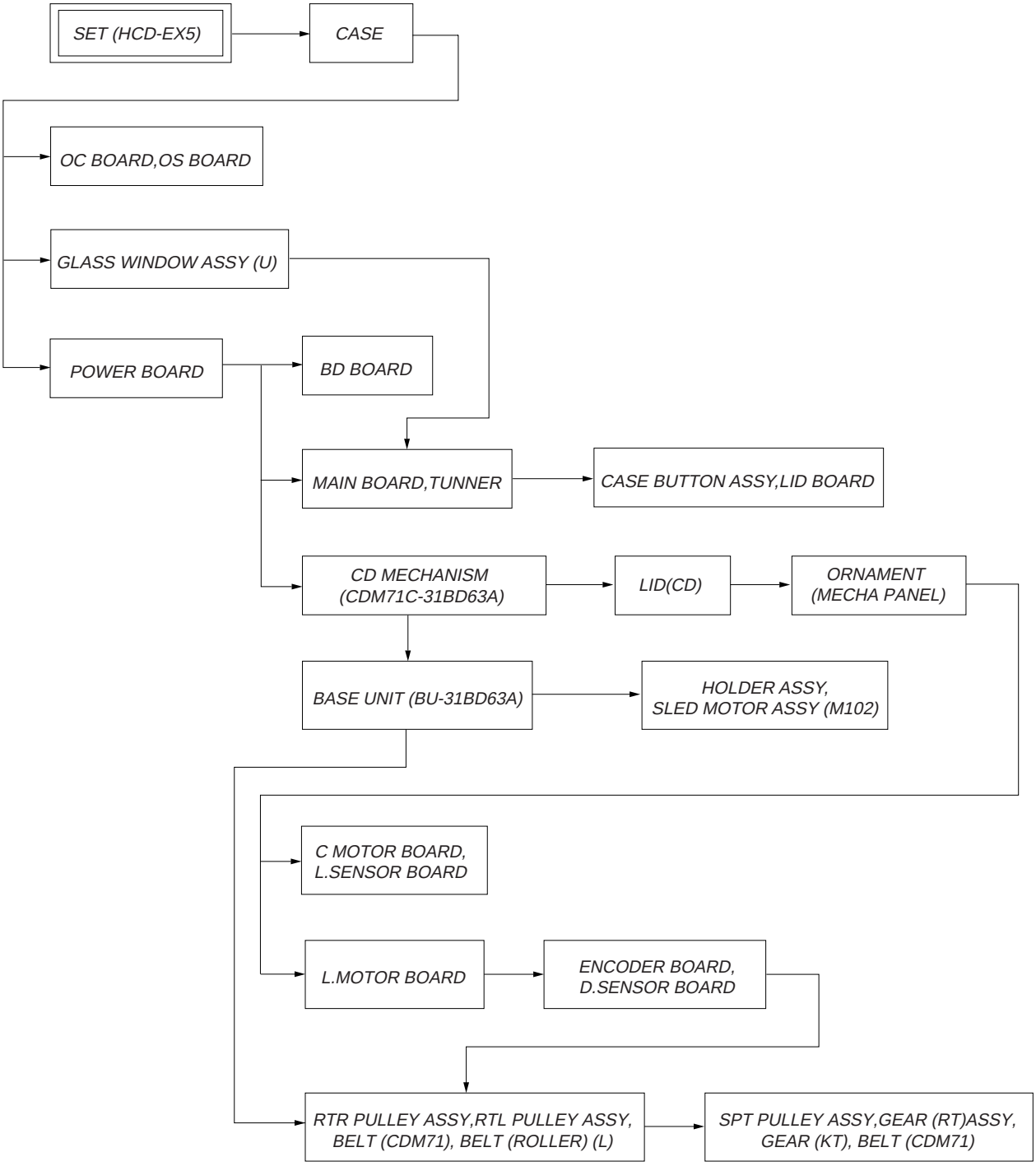
1 Press CLOCK/TIMER SET on the remote.

2 Press I◄◄ or ►►I on the remote repeatedly to select “CLOCK SET?”, then press ENTER/YES on the remote.

3 Do the same procedures as steps 3 to 5 above.

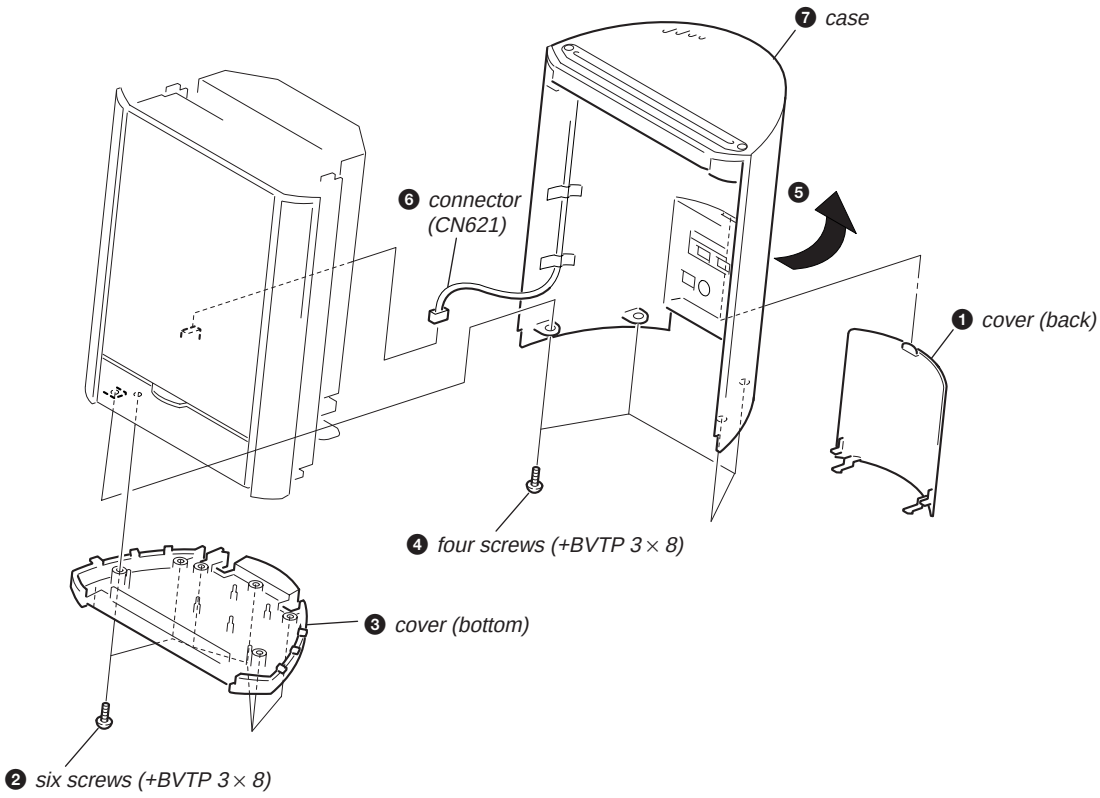
SECTION 3
DISASSEMBLY

• The equipment can be removed using the following procedure.

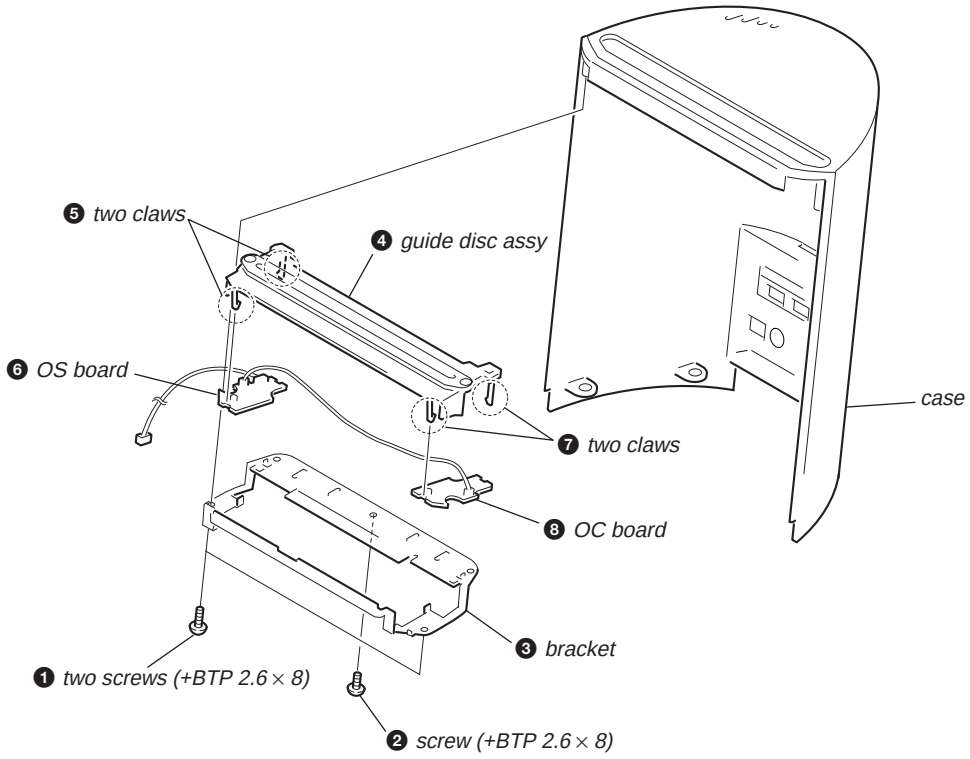


Note : Follow the disassembly procedure in the numerical order given.

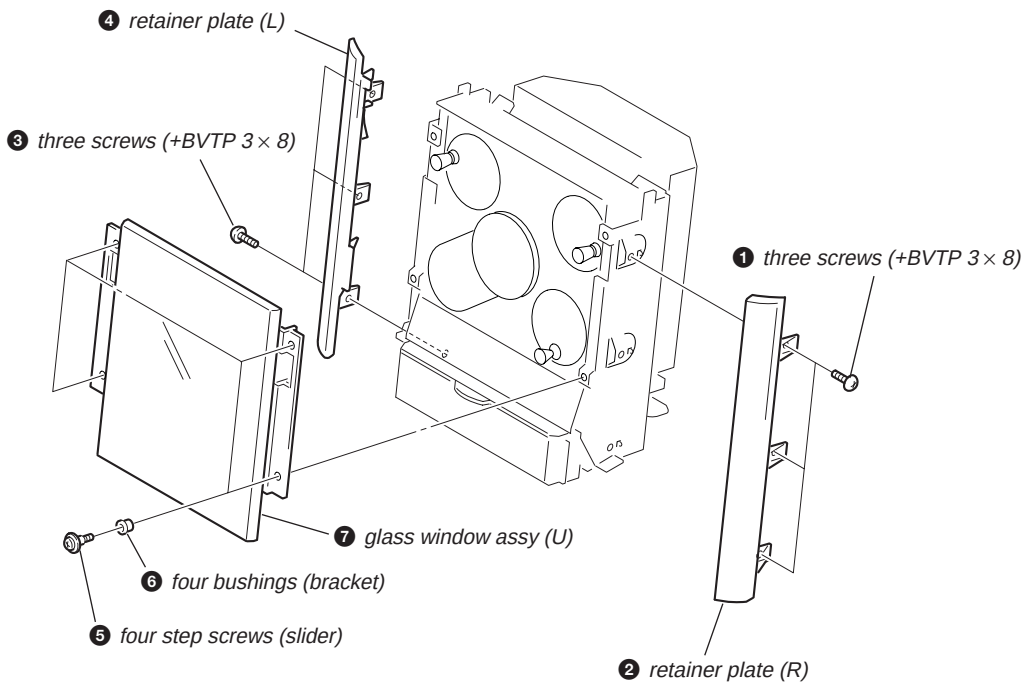
3-1. Case



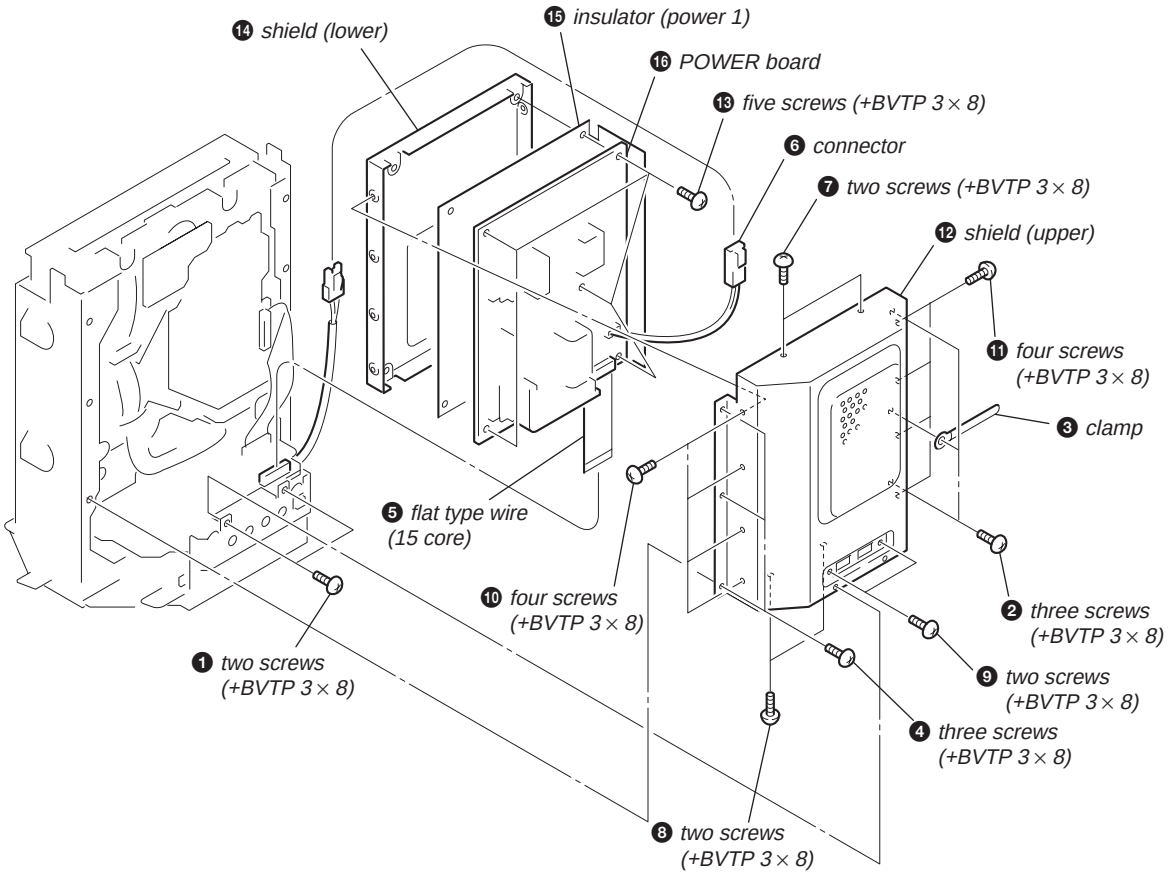
3-2. OC Boad,OS Boad



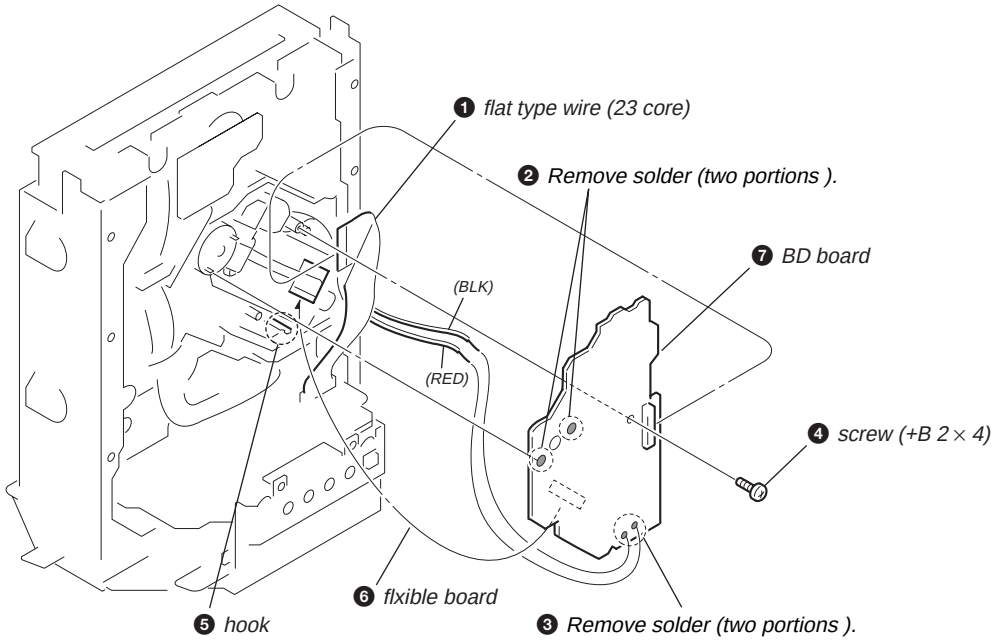
3-3. Glass Window Assy (U)


❹ retainer plate (L)
❸ three screws (+BVTP 3 × 8)
❶ three screws (+BVTP 3 × 8)
❼ glass window assy (U)
❻ four bushings (bracket)
❺ four step screws (slider)
❷ retainer plate (R)

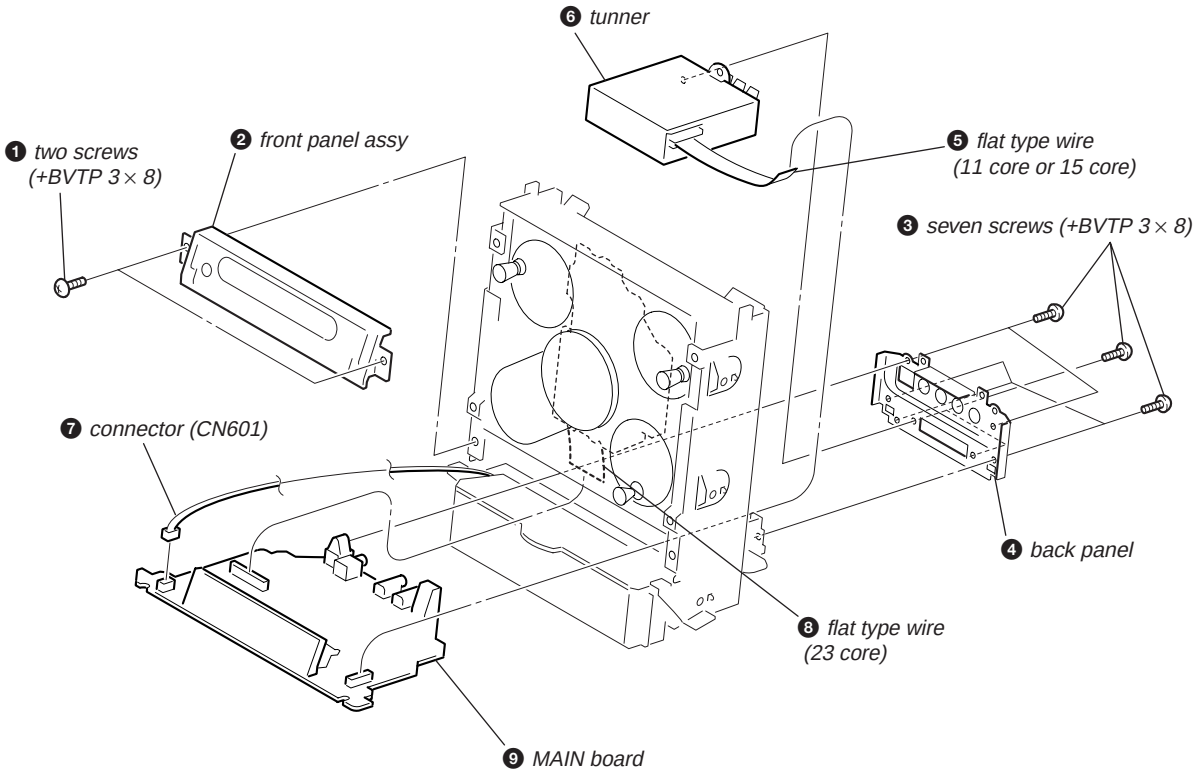
3-4. POWER Board


⓮ shield (lower)
⓯ insulator (power 1)
⓰ POWER board
⓭ five screws (+BVTP 3 × 8)
❻ connector
❼ two screws (+BVTP 3 × 8)
⓬ shield (upper)
⓫ four screws (+BVTP 3 × 8)
❸ clamp
❺ flat type wire (15 core)
❿ four screws (+BVTP 3 × 8)
❷ three screws (+BVTP 3 × 8)
❶ two screws (+BVTP 3 × 8)
❾ two screws (+BVTP 3 × 8)
❹ three screws (+BVTP 3 × 8)
❽ two screws (+BVTP 3 × 8)

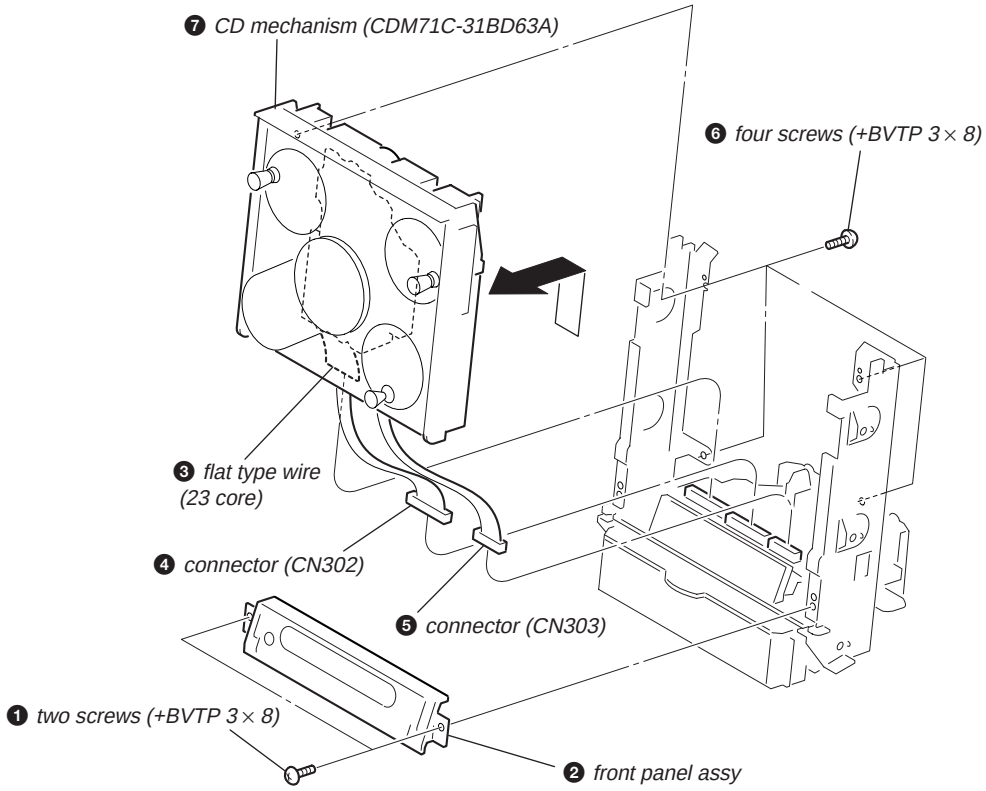
3-5. BD Board



3-6. MAIN Board, Tunner

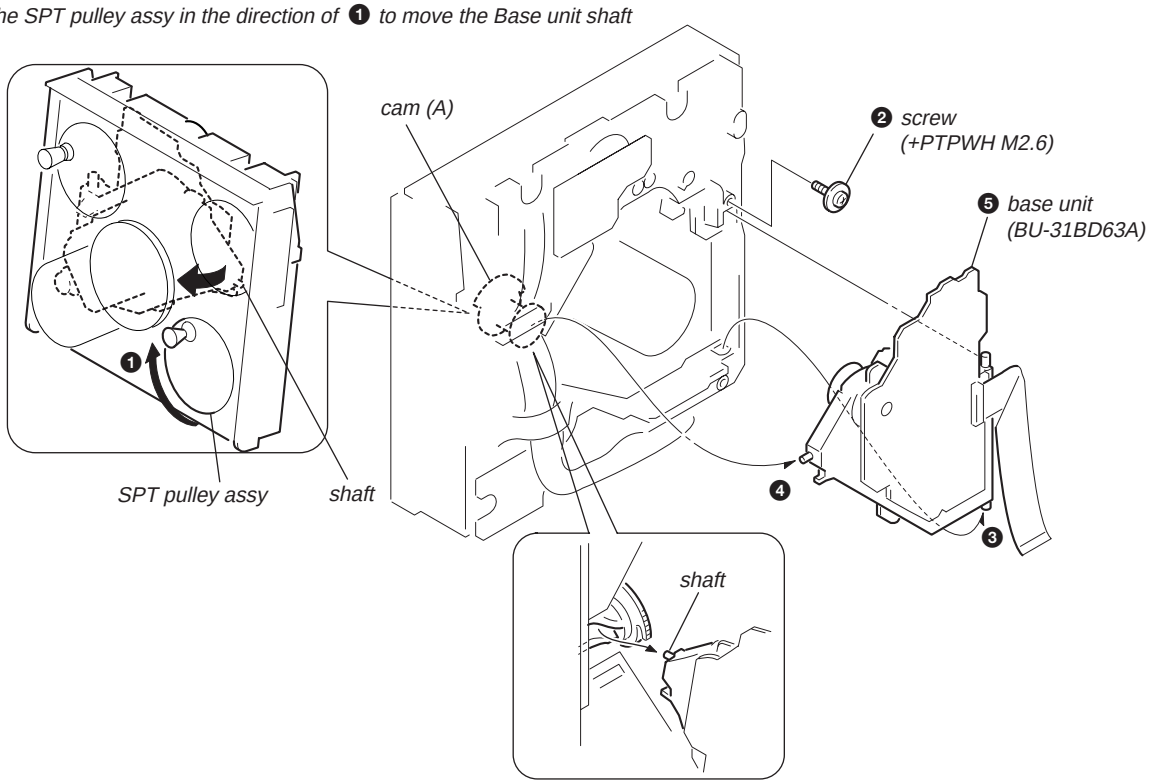

❻ tunner
❶ two screws (+BVTP 3× 8)
❷ front panel assy
❺ flat type wire (11 core or 15 core)
❸ seven screws (+BVTP 3× 8)
❼ connector (CN601)
❹ back panel
❽ flat type wire (23 core)
❾ MAIN board

3-7. CD Mechanism (CDM71C-31BD63A)

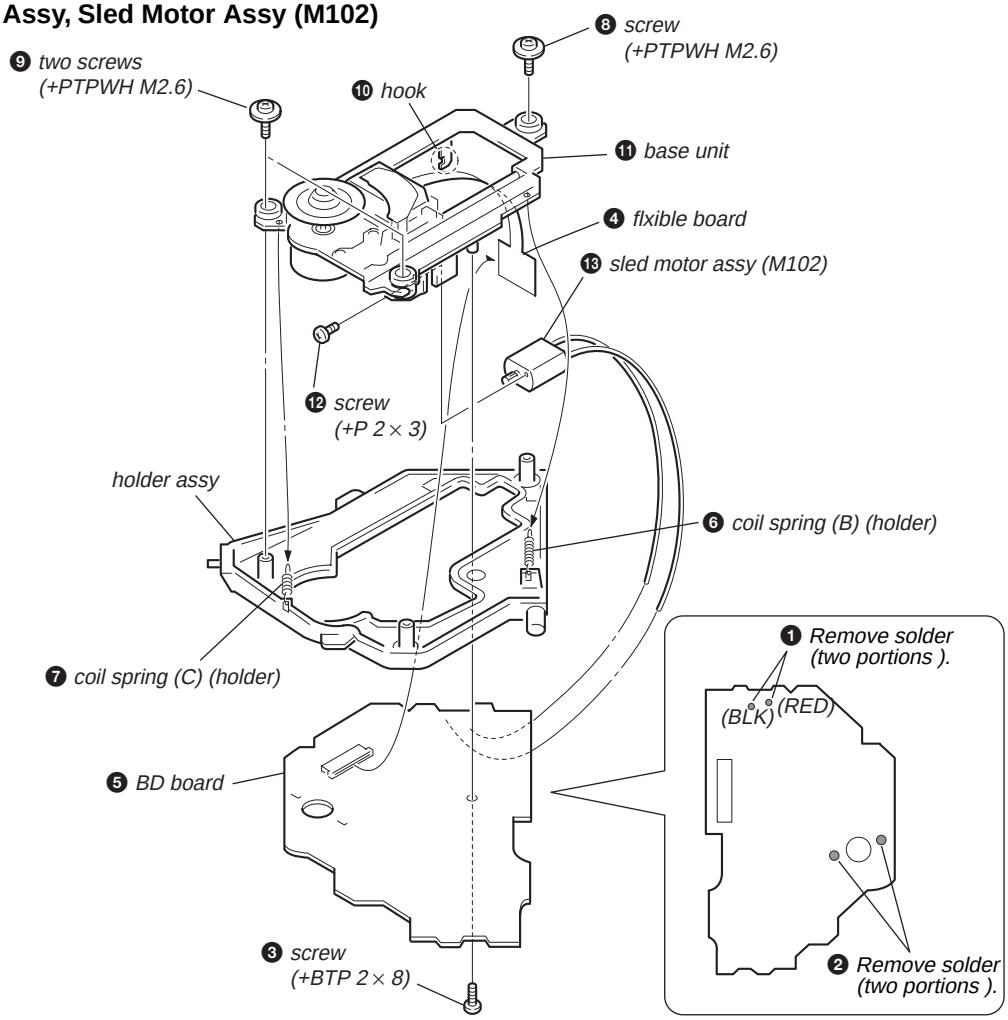

❼ CD mechanism (CDM71C-31BD63A)
❻ four screws (+BVTP 3× 8)
❸ flat type wire (23 core)
❹ connector (CN302)
❺ connector (CN303)
❶ two screws (+BVTP 3× 8)
❷ front panel assy

3-8. Base Unit(BU-31BD63A)

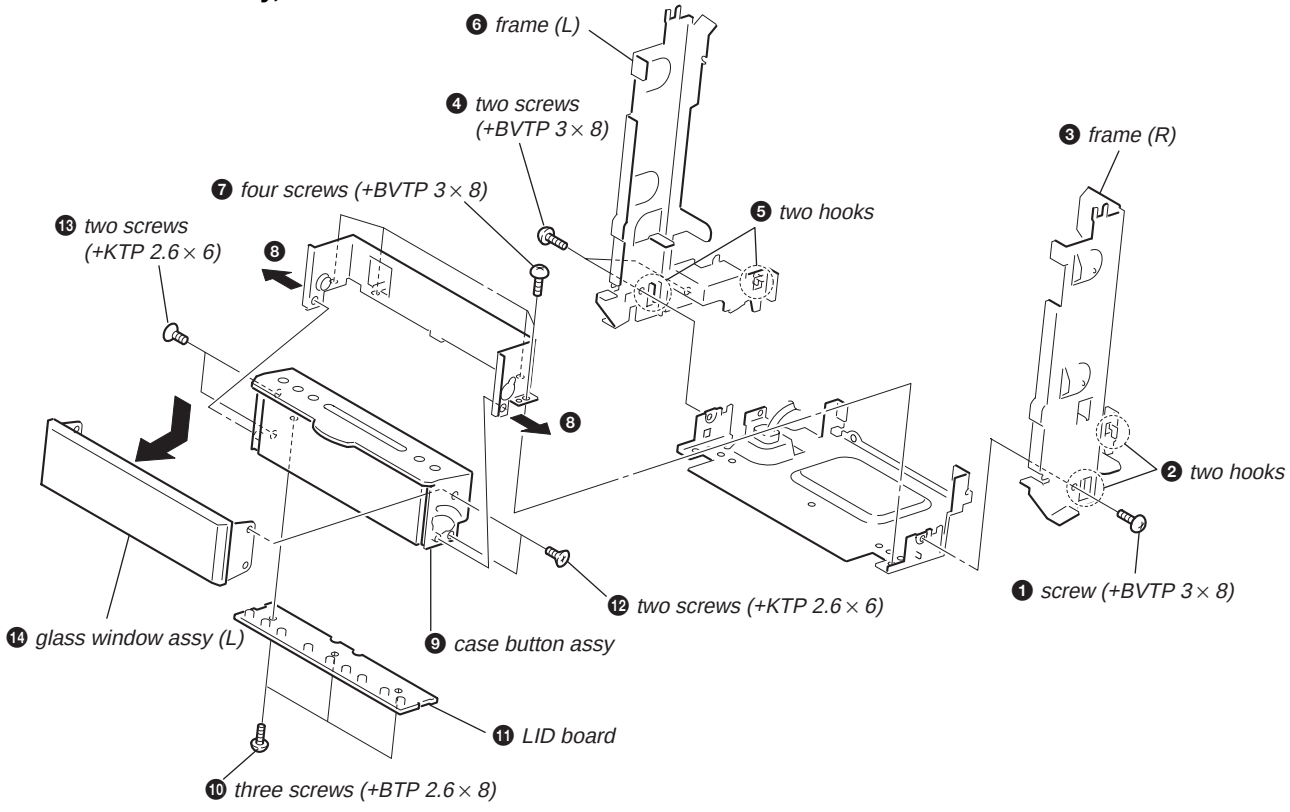
Rotate the SPT pulley assy in the direction of ❶ to move the Base unit shaft forward.



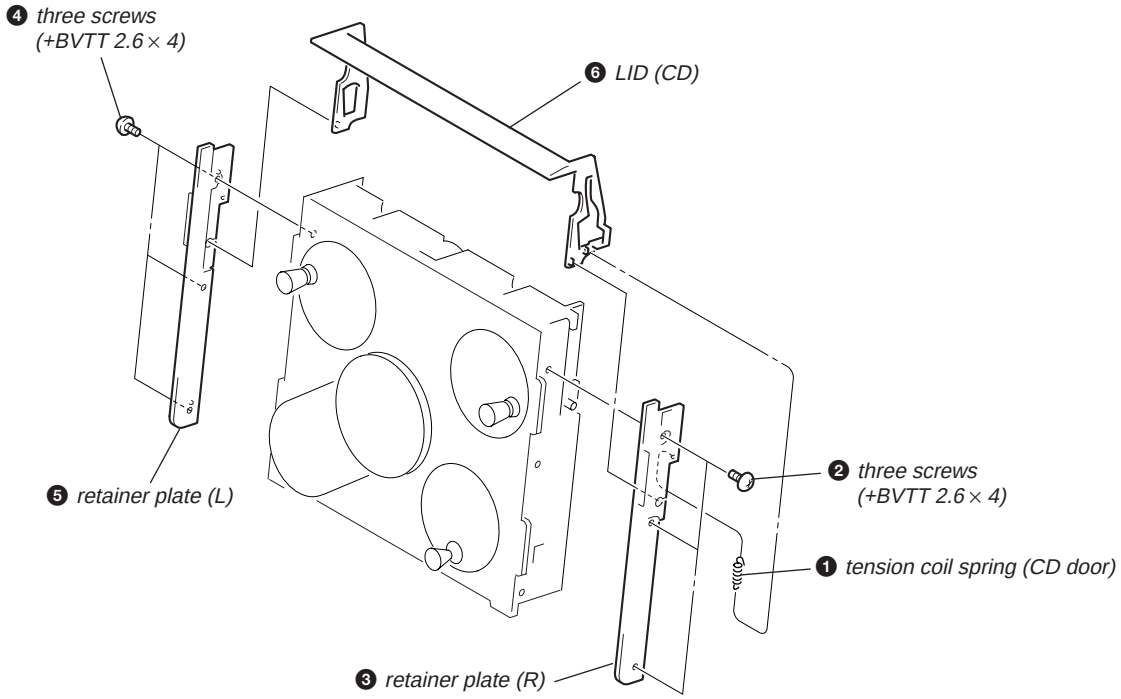
3-9. Holder Assy, Sled Motor Assy (M102)



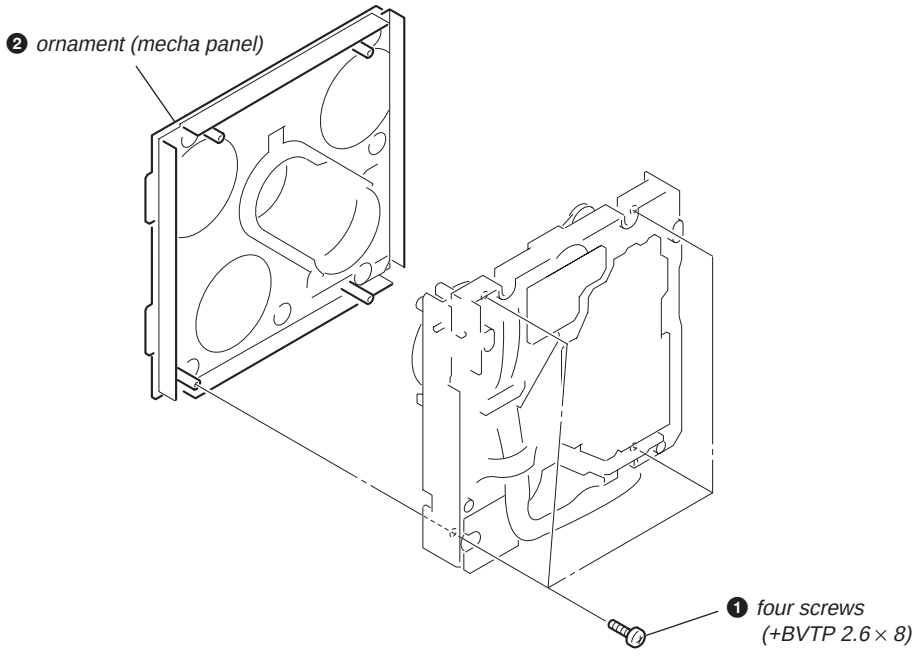
3-10. Case Button Assy, LID Board


❻ frame (L)
❹ two screws (+BVTP 3 × 8)
❸ frame (R)
❼ four screws (+BVTP 3 × 8)
❺ two hooks
⓭ two screws (+KTP 2.6 × 6)
❽
❽
❷ two hooks
❶ screw (+BVTP 3 × 8)
⓬ two screws (+KTP 2.6 × 6)
⓮ glass window assy (L)
❾ case button assy
⓫ LID board
❿ three screws (+BTP 2.6 × 8)

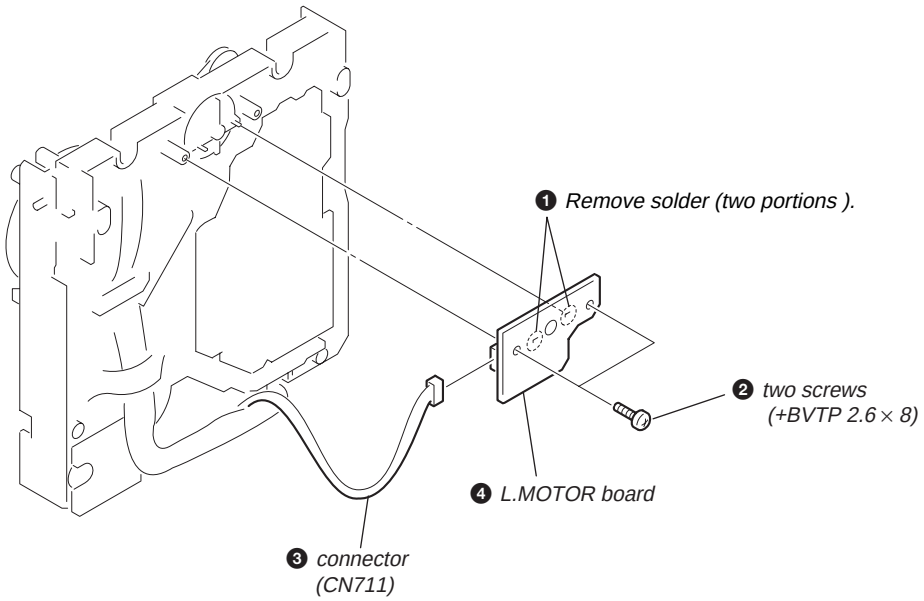
3-11. LID (CD)



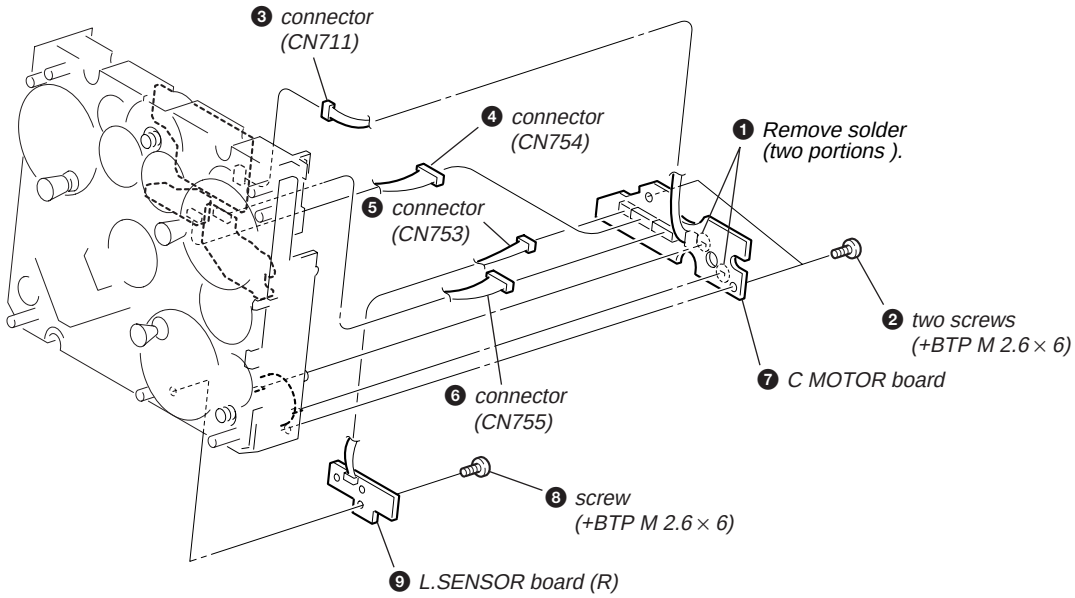
3-12. Ornament (Mecha Panel)



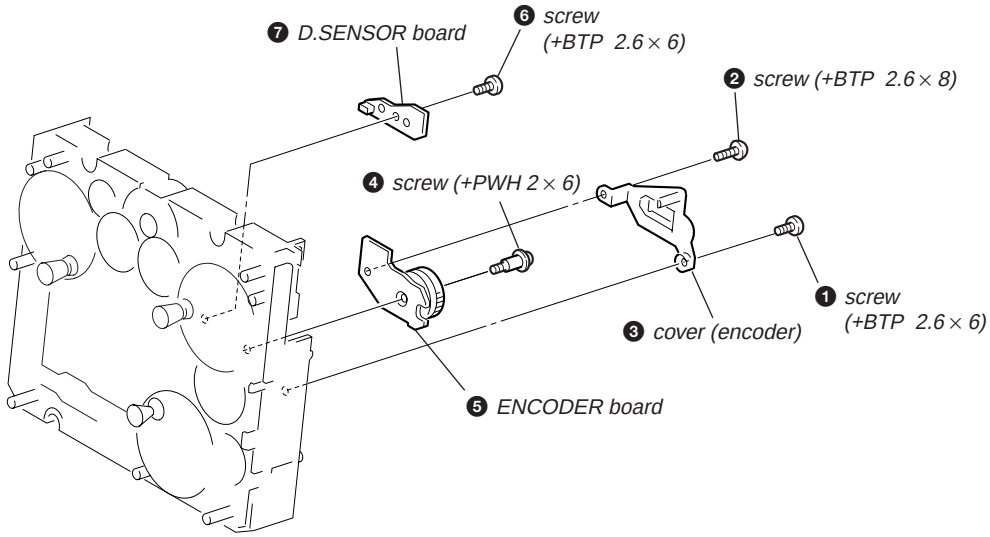
3-13. L.MOTOR Board



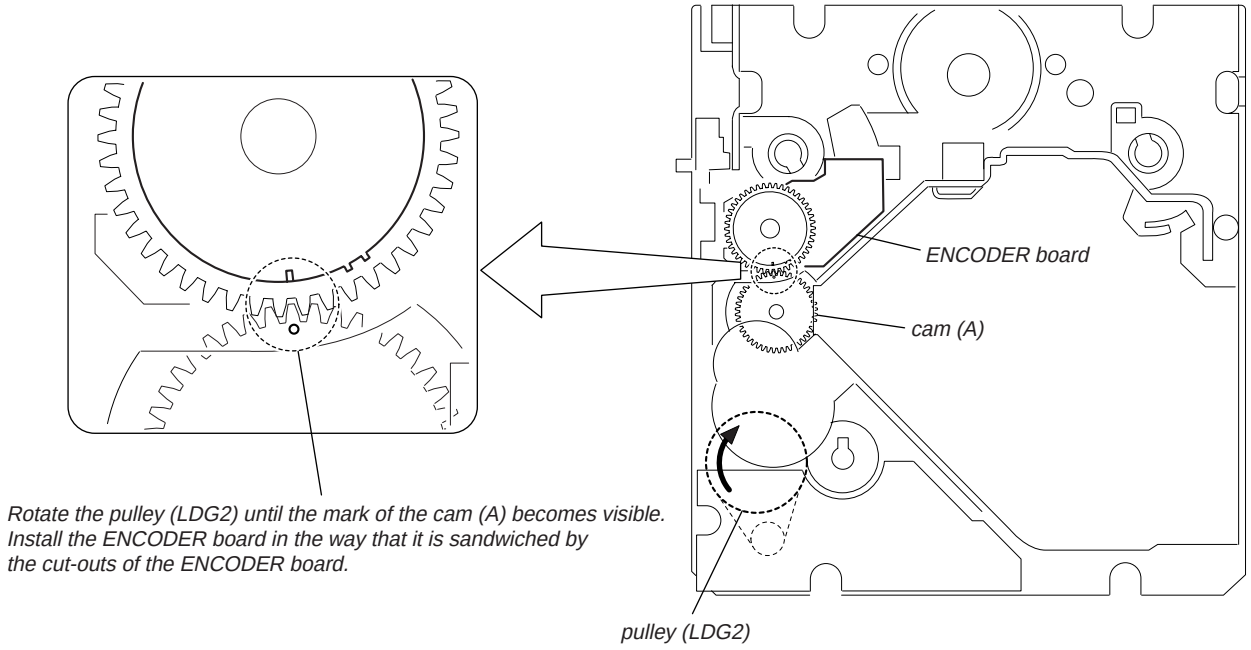
3-14. C MOTOR Board, L.SENSOR Board



3-15. ENCODER Board, D.SENSOR Board

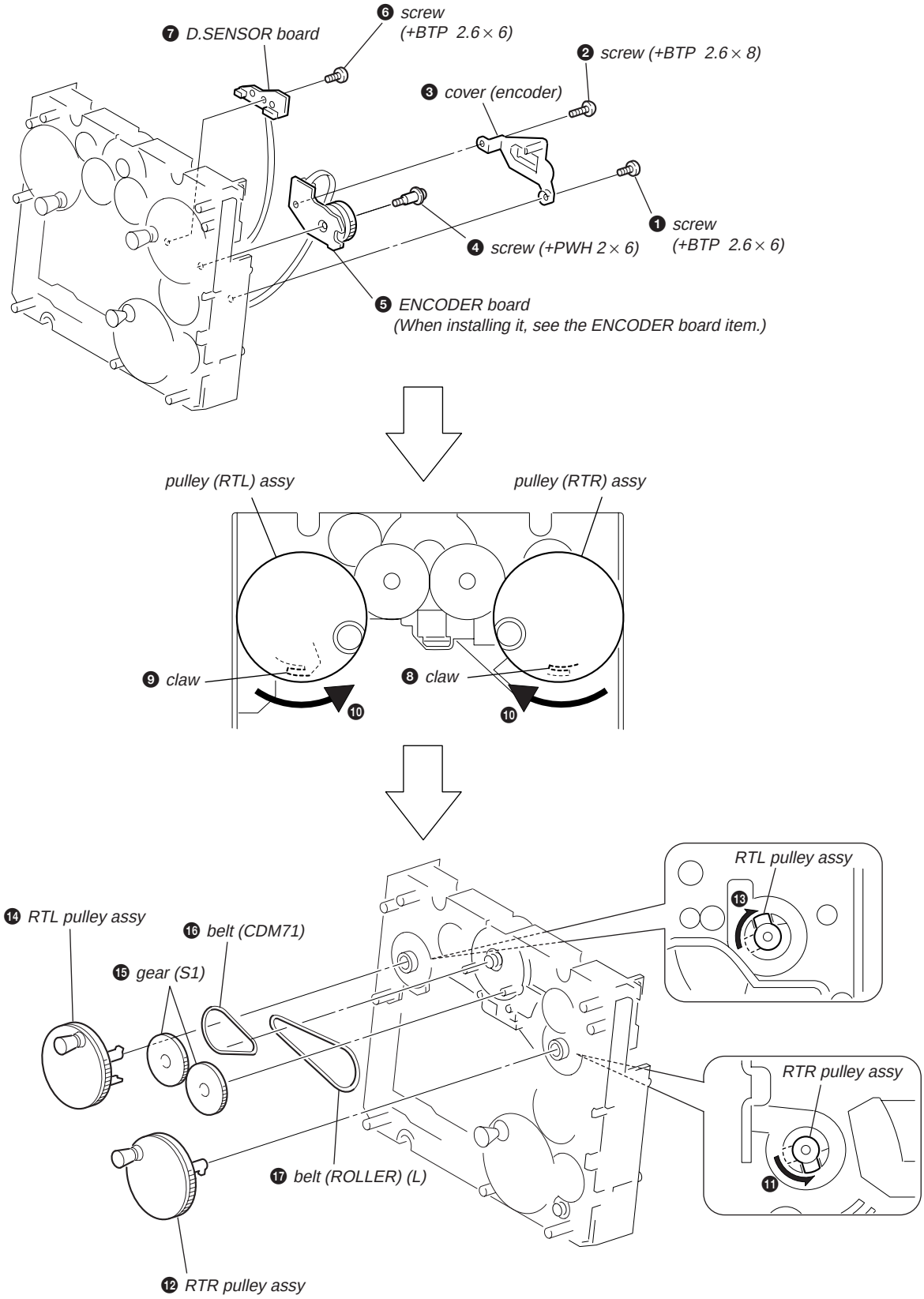


PRECAUTION DURING ENCODER board INSTALLATION

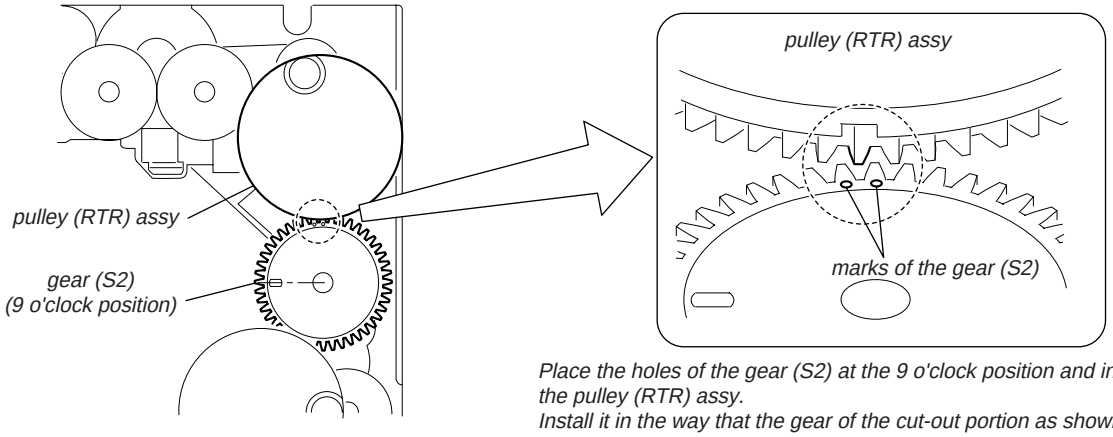


Rotate the pulley (LDG2) until the mark of the cam (A) becomes visible. Install the ENCODER board in the way that it is sandwiched by the cut-outs of the ENCODER board.

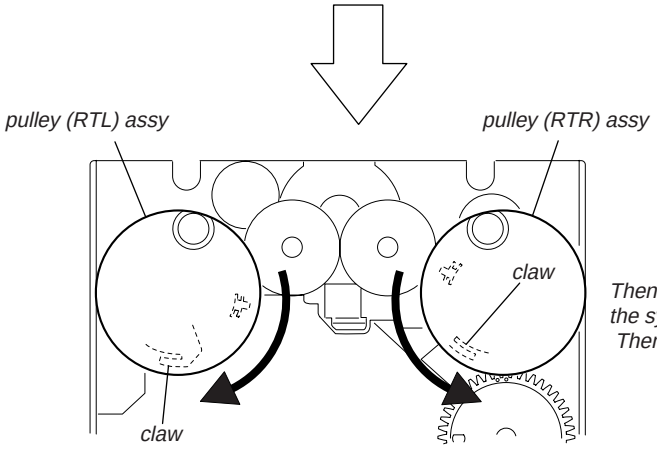
3-16. RTR Pulley Assy, RTL Pulley Assy, Belt (CDM71), Belt (Roller) (L)



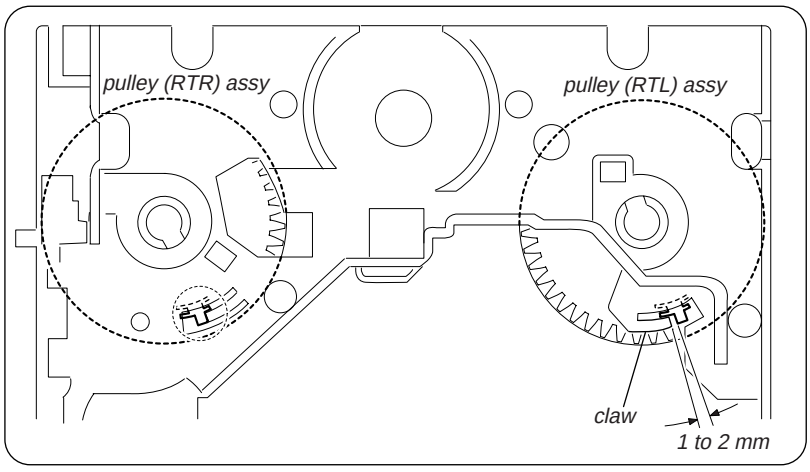
PRECAUTION DURING PULLEY (RTR) ASSY, PULLEY (RTL) ASSY INSTALLATION



Place the holes of the gear (S2) at the 9 o'clock position and install the pulley (RTR) assy.
Install it in the way that the gear of the cut-out portion as shown is located in between the marks of the gear (S2).

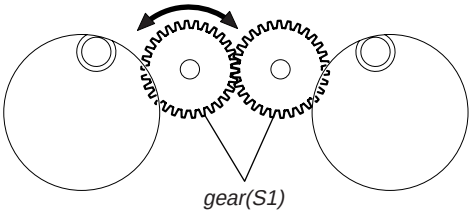


Then install the pulley (RTL) assy in the way that it can perform the symmetrical movement with the pulley (RTR) assy.
Then lock both claws.



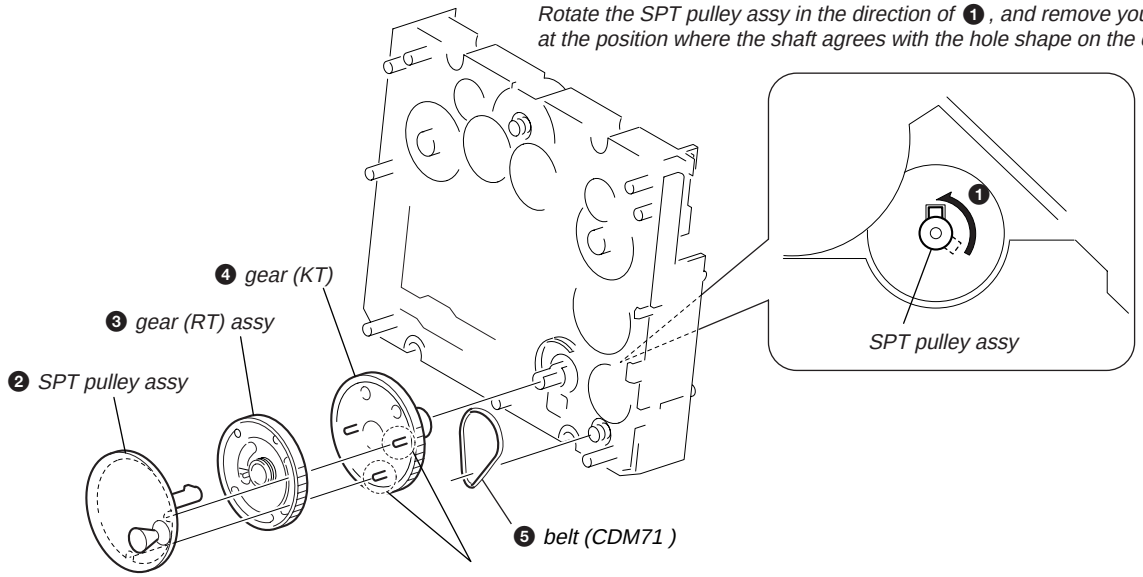
Confirm that the pulley (RTR) contacts the claws.
Opposite to it, the pulley (RTL) assy must have clearance of 1 to 2 mm with the claw.
It should contact with claw.

If clearance is too large or it contacts with claw, adjustment is necessary.



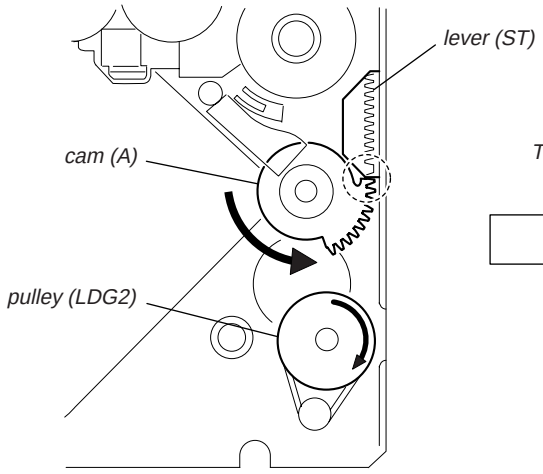
Method of adjustment is as follows.
Raise the right gear (S1) a little and perform adjustment by moving the left gear (S1).

3-17. SPT Pulley Assy, Gear (RT) Assy, Gear (KT), Belt (CDM71)

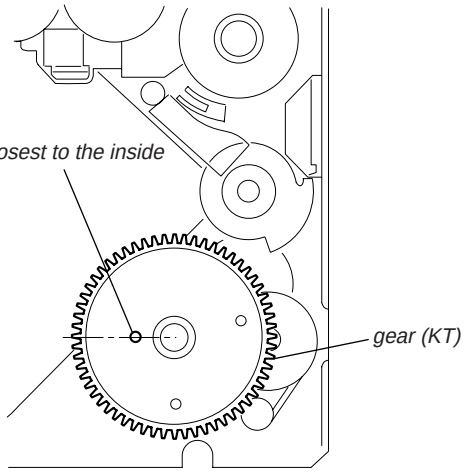

Rotate the SPT pulley assy in the direction of ❶ , and remove your hands at the position where the shaft agrees with the hole shape on the chassis.
❶
SPT pulley assy
❹ gear (KT)
❸ gear (RT) assy
❷ SPT pulley assy
❺ belt (CDM71)

When installing, align the protruded portion of the KT gear with groove of the SPT pulley assy.

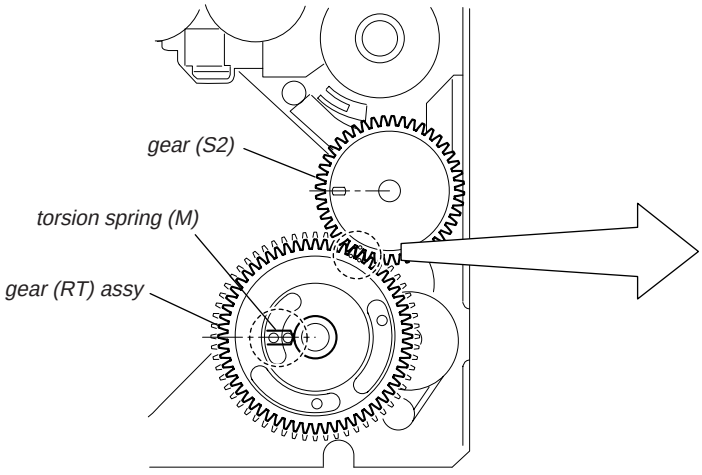
PRECAUTION DURING gear (RT) assy, gear (KT) INSTALLATION



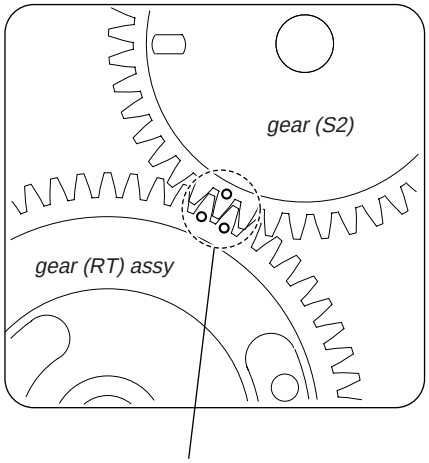
Rotate the pulley (LDG2) until it reaches the position where the cam (A) contacts with the lever (ST).



Install the gear (KT) and position it so that the boss that is closest to the inside is located at the 9 o'clock position.



Install the gear (RT) assy so that the two bosses are aligned in between the torsion spring (M).
Install the gear (S2) so that its hole is located at the 9 o'clock position.



Confirm that the gear (S2) mark is located in between the gear (RT) assy marks.

SECTION 4
TEST MODE

[Key Check Mode]

* Keyboard check.

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. To enter the test mode, press three buttons ⏏ , DISPLAY , and ▶▶I simultaneously.
3. In the key check mode, the message “KEY00” is displayed. Each time a button is pressed, “KEY00” value increases. However, once a button is pressed, it is no longer taken into account.
4. To exit from this mode, press three buttons ⏏ , DISPLAY , and ▶▶I simultaneously.

[Version Display Mode]

* The version or destination is displayed.

Procedure:

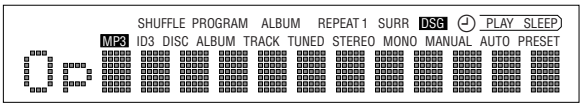
1. Press the I/⏻ button to turn the set ON.
2. To enter the test mode, press three buttons ⏏ , DISPLAY , and ■ simultaneously.
3. The model name and destination are displayed.
4. Press the DISPLAY button. The STR version is displayed.
5. Press the DISPLAY button again. The CD version is displayed.
6. Press the DISPLAY button. The model name and destination are displayed again.
7. To exit from this mode, press the I/⏻ button to turn off the set.

[LCD Test Mode]

* All LCD segments are tested.

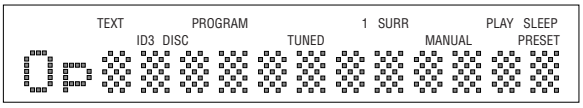
Procedure:

1. Press the I/⏻ button to turn the set ON.
2. To enter the test mode, press three buttons ⏏ , DISPLAY , and I◀◀ simultaneously.
3. The following segments are turned on.

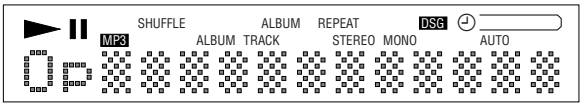


These segments remain when entering into the LCD test mode.

4. Press the DISPLAY button. All segments are turned off.
5. Press the DISPLAY button. Confirm the pattern of segments.



6. Press the DISPLAY button. Confirm the pattern of segments.



7. Every pressing of the DISPLAY button turns on each segment one after another in the same order.
8. To exit from this mode, press the I/⏻ button to turn off the set.

[Amp Test Mode]

* Volume level is changed for the amplifier test.

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. To enter the test mode, press three buttons ⏏ , DISPLAY , and ▶II simultaneously.
3. Volume level is changeable at three steps as “VOLUME MIN”, “VOLUME 21”, “VOLUME MAX” by pressing VOLUME + or VOLUME – button.
4. In this test mode, the tuning mode is set to the preset mode.
5. To exit from this mode, press the I/⏻ button to turn off the set.

[Forced Reset]

* All micro-processors are forced to reset at the same time.

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. Press three buttons ⏏ , FUNCTION , and TUNER/BAND simultaneously.
3. The message “COLD RESET” is displayed and the set is reset. Then the set is turned off.

[CD Ship Position]

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. Press the FUNCTION button for the setting CD.
3. Press three buttons ⏏ , VOLUME – , and ▶▶I simultaneously.
4. The message “COLD RESET” is displayed and CD is set to the shipment position. Then the set is turned off.

[Loading Mechanism Lock]

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. Press two buttons of ■ and ⏏ simultaneously for five seconds.
3. The message “LOCKED” is displayed and the loading mechanism is locked. (Even if exiting from this mode, the loading mechanism is still locked.)
4. Press two buttons of ■ and ⏏ simultaneously for five seconds again.
5. The message “UNLOCKED” is displayed and the loading mechanism is unlocked.
6. To exit from this mode, press the I/⏻ button to turn the set off.

[Aging In1 Mode]

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. Insert the disc.
3. Select the FUNCTION to CD.
4. To enter the test mode, press three buttons VOLUME – , ▶II and ⏏ simultaneously.
5. Aging operation starts automatically.
6. The CD is out, drawn in and the first track is played. Then the last track is played.
7. The CD is out again, and the message “AGIN00000001” is displayed. This value is cycle times of aging operation and displays hexadecimal data.
8. The CD is drawn in and aging operation is continued.
9. To exit from this mode, press the I/⏻ button to turn off the set.

[Aging In Mode]

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. Select the FUNCTION to CD.
3. To enter the test mode, press three buttons VOLUME + , ⏭ and ⏏ simultaneously.
4. Confirm that “dvt AGING” is displayed.
5. Press the ⏏ button.
6. Confirm that “dvt AGING SL” is displayed.

Releasing Method of Test Mode

1. Press the ■ button to display “dvt AGING”.
2. Press the ■ button again.

Menu Selection of Aging Selection Mode

1. Select the operation in the menu by pressing the ⏮ or ⏭ button.
2. Press the ⏏ button. The menu is selected.
3. Press the ■ button to return to the menu again.

SELECTION OF AGING AND START “dvt AGING SL”
↕
DISPLAY OF TIMES OF AGING “dvt AGING DP”

Selection of Aging and Start

1. Confirm that “AGING SEL=00” is displayed.
2. Select the aging operation in the menu by pressiing the ⏮ or ⏭ button. Normally “00” is suitable.
3. Press the ⏏ button.
4. Aging operation starts automatically.

DISPLAY : “AGING SEL = ##”
: type of aging
- 00 : OPEN → CHUCK → the first track playback → the last track playback → OPEN → CHUCK → ⋯
- 01 to 03 : not for service
- 04 : the first track playback → the last track playback → the first track playback → ⋯
- 05 to o6 : not for service

Display of Times of Aging

1. Confirm that “dvt AGING DP” is diplayed.
2. Press the ⏏ button.

DISPLAY : “AGING********”
******** : 0 to FFFFFFFF (hexadecimal) times of aging cycle executed

Releasing Method of Aging Operation
Press the I/⏻ button to turn off the set.

[Error History Display Mode]

Procedure:

Setting Method of Test Mode

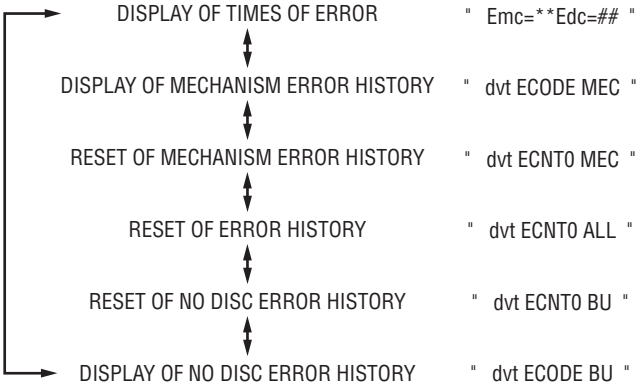
1. Press the I/⏻ button to turn the set ON.
2. Select the FUNCTION to CD.
3. To enter the test mode, press three buttons ⏏ , VOLUME + , and ⏯ simultaneously.
4. Confirm to display “dvt ERR CODE”.
5. Press the ⏏ button.

Releasing Method of Test Mode

1. Press the ■ button to display “dvt ERR CODE”.
2. Press the ■ button.

Menu Selection of Error History Display Mode

1. Select the operation in the menu by pressing the ⏮ or ⏭ button.
2. Press the ⏏ button. The menu is selected. If returning to the menu again, press the ■ button.


DISPLAY OF TIMES OF ERROR
" Emc=**Edc=## "
DISPLAY OF MECHANISM ERROR HISTORY
" dvt ECODE MEC "
RESET OF MECHANISM ERROR HISTORY
" dvt ECNT0 MEC "
RESET OF ERROR HISTORY
" dvt ECNT0 ALL "
RESET OF NO DISC ERROR HISTORY
" dvt ECNT0 BU "
DISPLAY OF NO DISC ERROR HISTORY
" dvt ECODE BU "

Display of Times of Error
* Number of times of mechanism error and no disc error is displayed in hexadecimal.

DISPLAY : “ Emc=**Edc=## “
** : number of times of mechanism error (hexadecimal)
: number of times of no disc error (hexadecimal)

Display of Mechanism Error History

1. Select the operation in the menu by pressing the ⏮ or ⏭ button to display “dvt ECODE MEC”.
2. Press the ⏏ button.
3. Select the mechanism error code by pressing the ⏮ or ⏭ button.

DISPLAY : " E**M##%%0000 "
- ** : order of mechanism error happens (hexadecimal)
  - 00 : the newest error
  - 09 : the error ten times before
- ## : completion of an initialization (hexadecimal)
  - ff : completion
  - others : not completed
- %% : condition of CDM operation when the trouble happened (hexadecimal)
  - 00 : during an initialization
  - 1x : during opening (x : not fixed)
  - 16 to 19 : during a kick by falure of opening
  - 2x : completion of opening
  - 28 : completion of opening under the condition of no disc
  - 3x : during close request
  - 4x : during open request
  - 5x : during closing
  - 6x : during chucking
  - 80 : during releasing
  - 9x : during operation of BU down
  - ax : during operation of shutter opening or closing
  - b0 : during BU up request
  - c0 : during BU down request
  - dx : during operation of BU up
- 0000 : fixed

Reset of Mechanism Error History
1. Select the operation in the menu by pressing the ⏮ or ⏭ button to display "dvt ECONT0 MEC".
2. Press the ⏯ button. Mechanism error history is reset.

Display of No Disc Error History
1. Select the operation in the menu by pressing the ⏮ or ⏭ button to display "dvt ECODE BU".
2. Press the ⏏ button.
3. Select the no disc code by pressing the ⏮ or ⏭ button.

DISPLAY : " E**D##%%@@&& "
- ** : order of no disc happens (hexadecimal)
  - 00 : the newest
  - 09 : ten times before
- ## : description of the trouble (hexadecimal)
  - 01 : focus NG
  - 02 : GFS NG
  - 03 : time-over of starting
  - 04 : continuous unlock of focus
  - 05 : no input of Q-codes in fixed time
- %% : condition when the trouble happened (hexadecimal)
  - 01 : during shipment position processing
  - 02 : during power off processing
  - 03 : during processing of initialization
  - 04 : during stop condition
  - 05 : during stop processing
  - 06 : during process of starting
  - 07 : during process of TOC reading
  - 08 : during search operation
  - 09 : during playback
  - 0a : during pause
  - 0b : during playback manual searching
  - 0c : during pause manual searching
- @@ : do not care
- && : rotating speed of a disc when the trouble happened (hexadecimal)
  - 01 : x1
  - 02 : x2 (double speed)
  - 03 : x4

Reset of No Disc Error History
1. Select the operation in the menu by pressing the ⏮ or ⏭ button to display "dvt ECONT0 BU".
2. Press the ⏯ button. No disc error history is reset.

Reset of Error History
1. Select the operation in the menu by pressing the ⏮ or ⏭ button to display "dvt ECONT0 ALL".
2. Press the ⏯ button. Error history is reset.

[Servo Test Mode]

*Error Rate Display

Procedure:

Setting Method of Test Mode
1. Press the I/⏻ button to turn the set ON.
2. Insert the disc.
3. Select the FUNCTION to CD.
4. Press the ⏯ button to play the CD.
5. To enter the test mode, press three buttons VOLUME +, ■ and ⏏ simultaneously. Confirm that the message "bdt STEST" is displayed.
6. Press the ⏮ or ⏭ button to display "dvt ERR RATE".
7. Press the ⏏ button.

Description of Error Rate

" ****####%%@@&& "

C1	C2	TNO	MIN	SEC

Releasing Method of Test Mode
1. Press the ■ button to display "dvt ERR RATE".
2. Press three buttons VOLUME +, ■ and ⏏ simultaneously.

[CD Repeat 5 Times Limit Release Mode]

Procedure:

Setting Method of Test Mode
1. Press the I/⏻ button to turn the set ON.
2. Select the FUNCTION to CD.
3. Press three buttons ⏏, VOLUME –, and ⏮ simultaneously.
4. The message "dvt REP LMT" is displayed.
5. Press the ⏏ button.

Releasing Method of Test Mode
1. Press the ■ button to display "dvt REP LMT"
2. Press the ■ button.

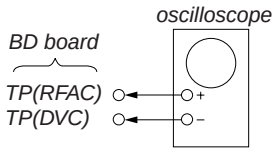
Selection of Repeat 5 Times Limit ON/OFF
1. Press the ⏮ or ⏭ button to display "REP LMT ON" or "REP LMT OFF".
2. Press the ■ button to select ON or OFF and "dvt REP LMT" is displayed.

SECTION 5
ELECTRICAL ADJUSTMENTS

CD SECTION

Note :
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

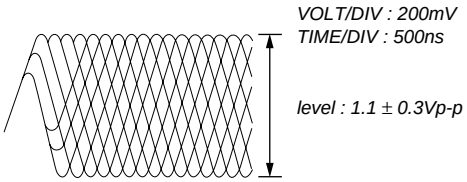
RF Level Check



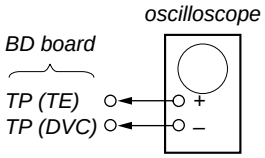
Procedure :
1. Connect oscilloscope to TP (RFAC).
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback the number five track.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform

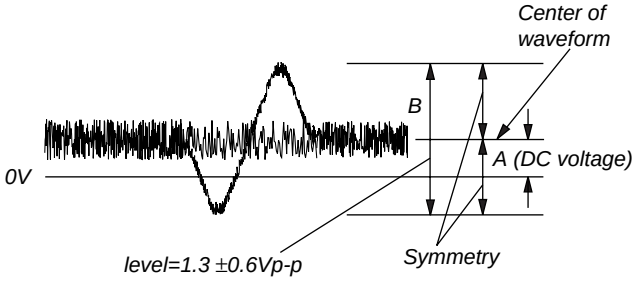


E-F Balance (1 Track jump) Check



Procedure:
1. Connect oscilloscope to TP (TE) and TP (DVC) board.
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the ►II button. (Becomes the 1track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.

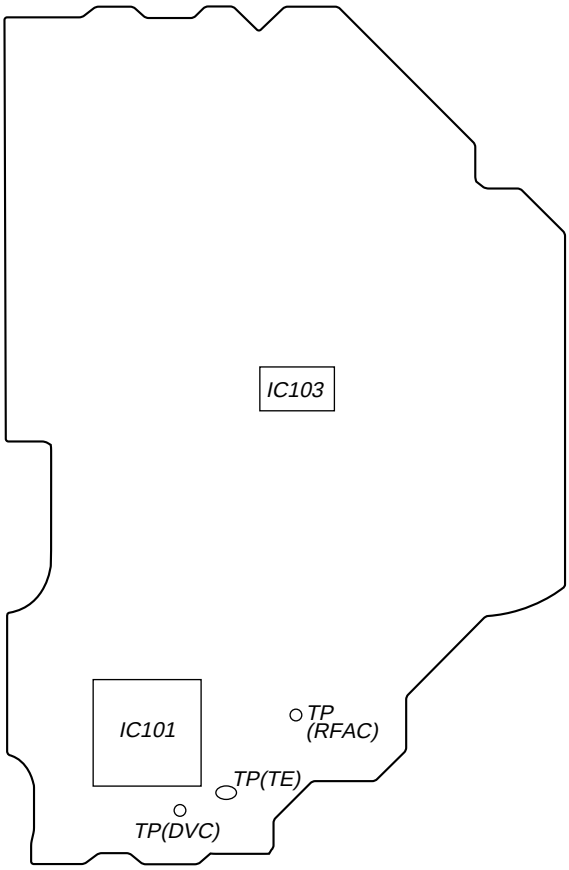
1 track jump waveform



Specification level: $\frac{A}{B}$ x 100=less than ±22%

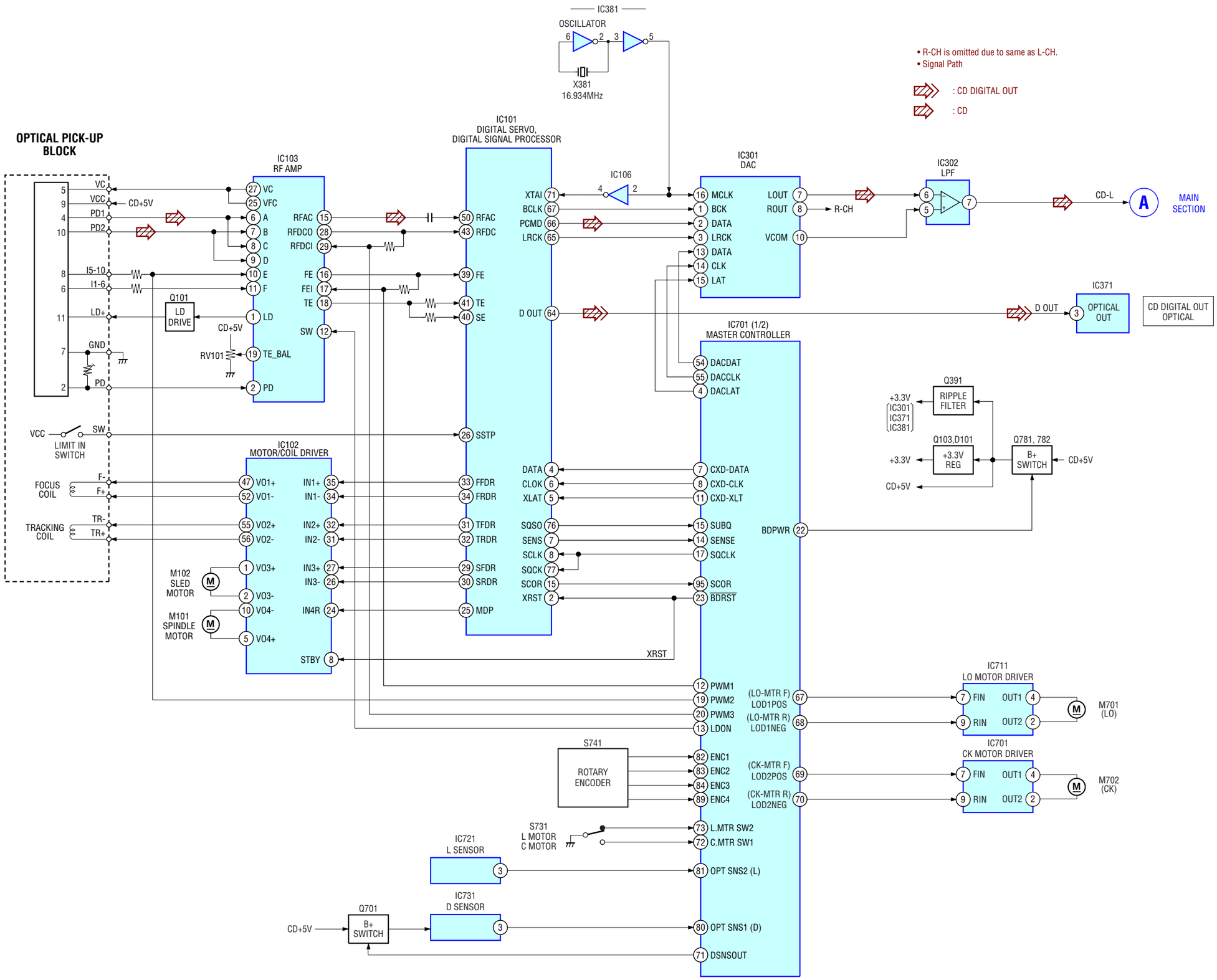
Adjustment Location :

[BD BOARD] — SIDE A —

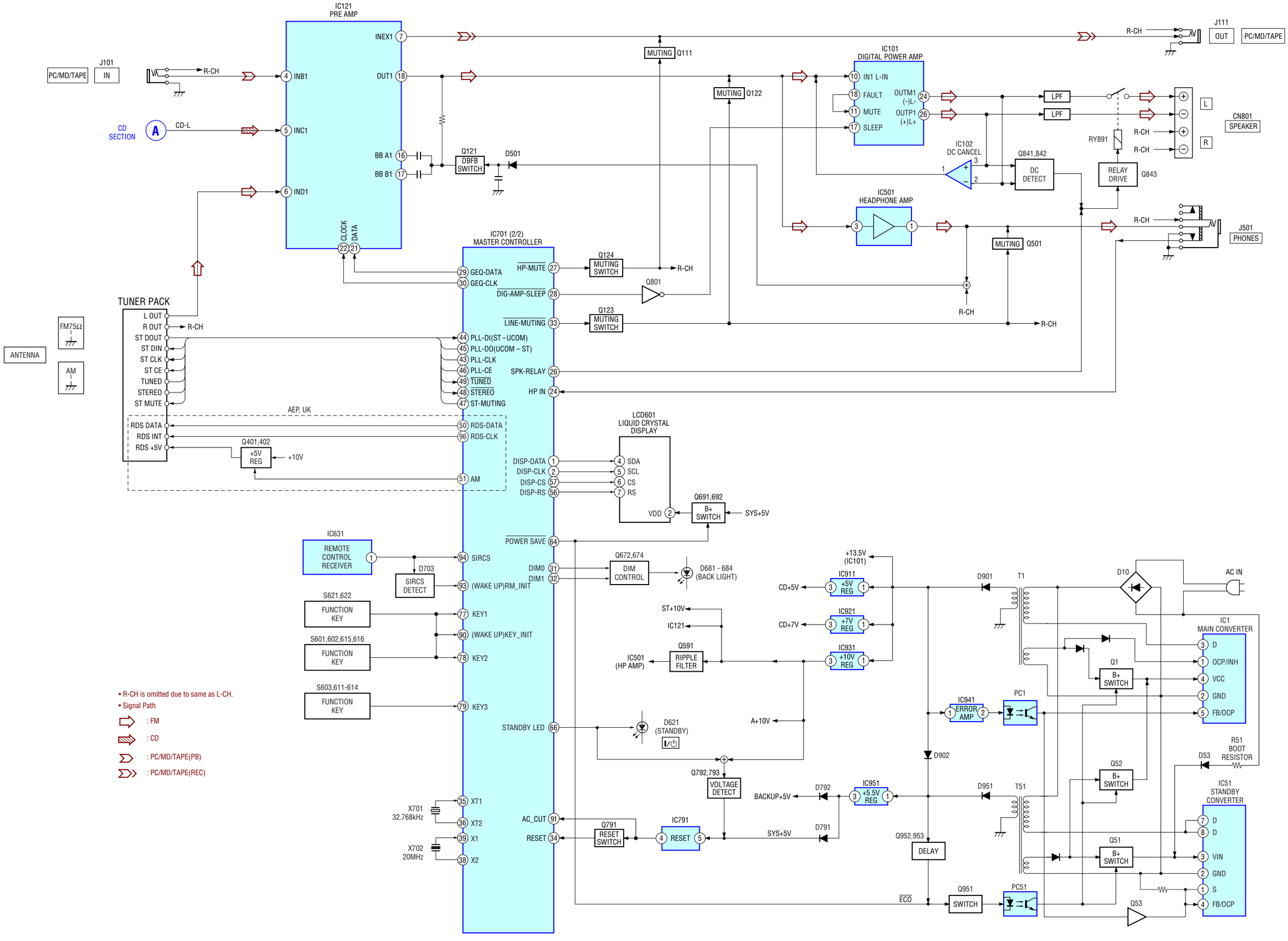


SECTION 6
DIAGRAMS

6-1. Block Diagrams
– CD Section –



– MAIN Section –



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

以阴影和⚠标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

- : B+ Line.
- : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : PB
  - : REC
  - : CD (Analog)
  - : CD (Digital)
- Abbreviation
  - MX : Mexican model.
  - AUS : Australian model.
  - SP : Singapore model.
  - HK : Hong Kong model.
  - TW : Taiwan model.
  - KR : Korean model
  - CND : Canadian model.

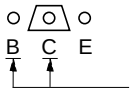
For printed wiring boards.

Note:

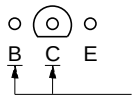
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

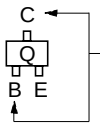
- **Indication of transistor**



These are omitted.

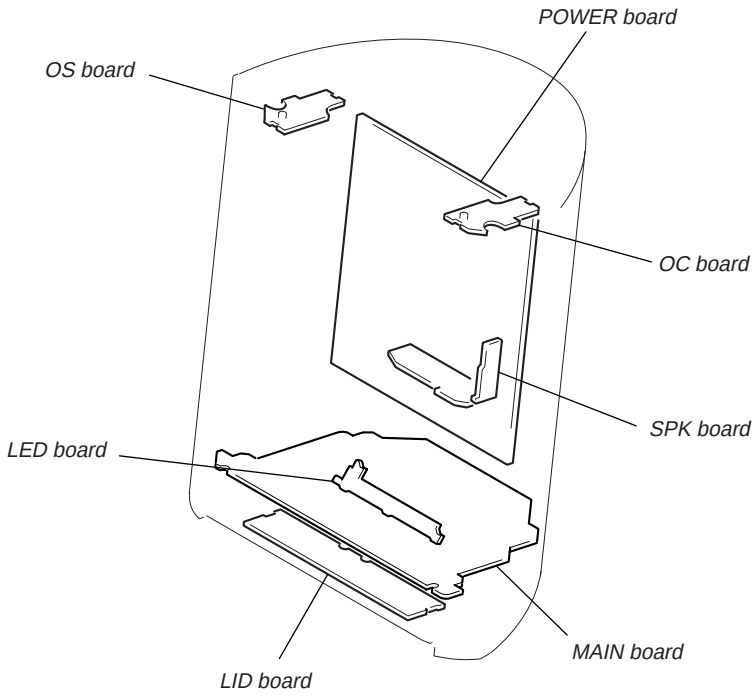


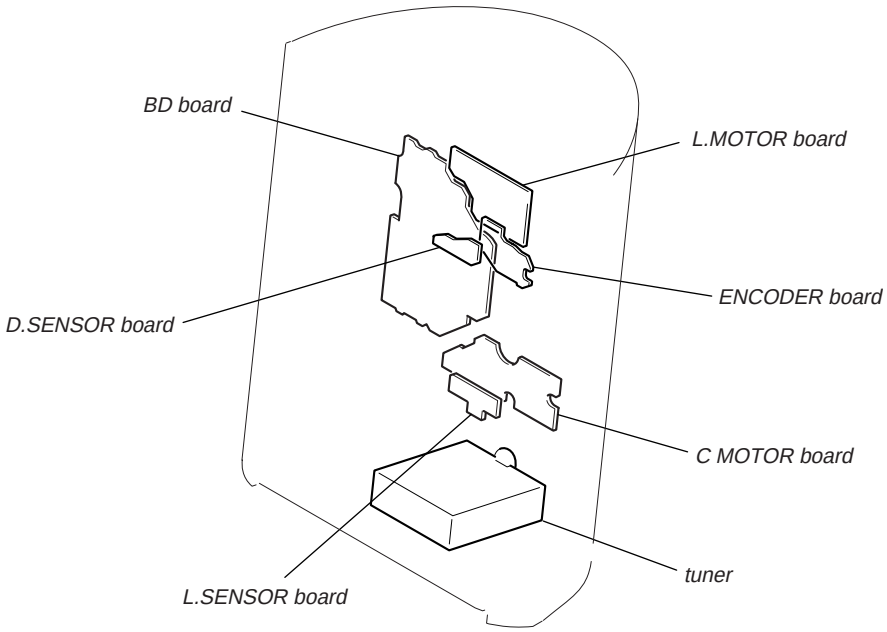
These are omitted.



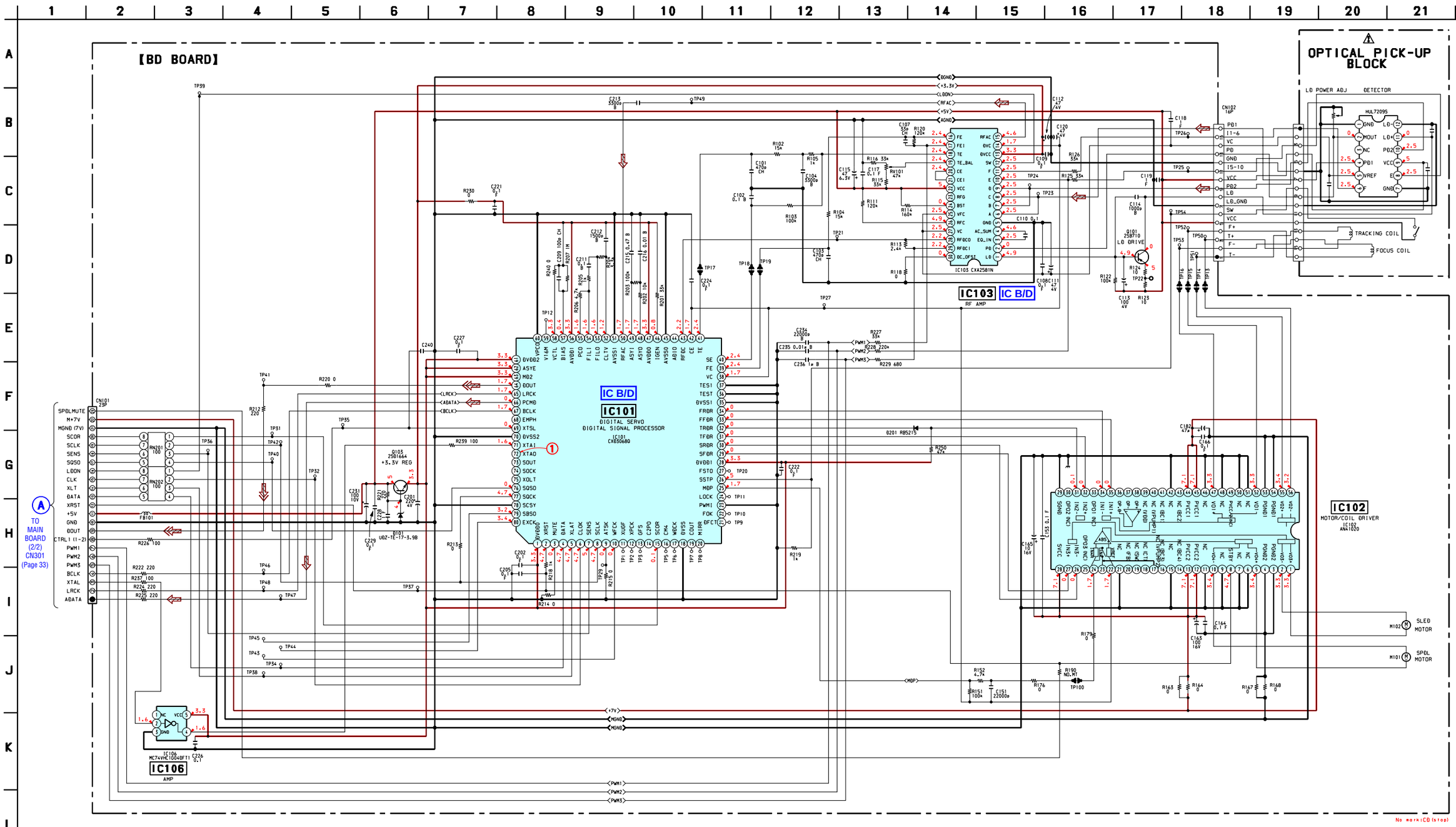
These are omitted.

6-2. Circuit Boards Location



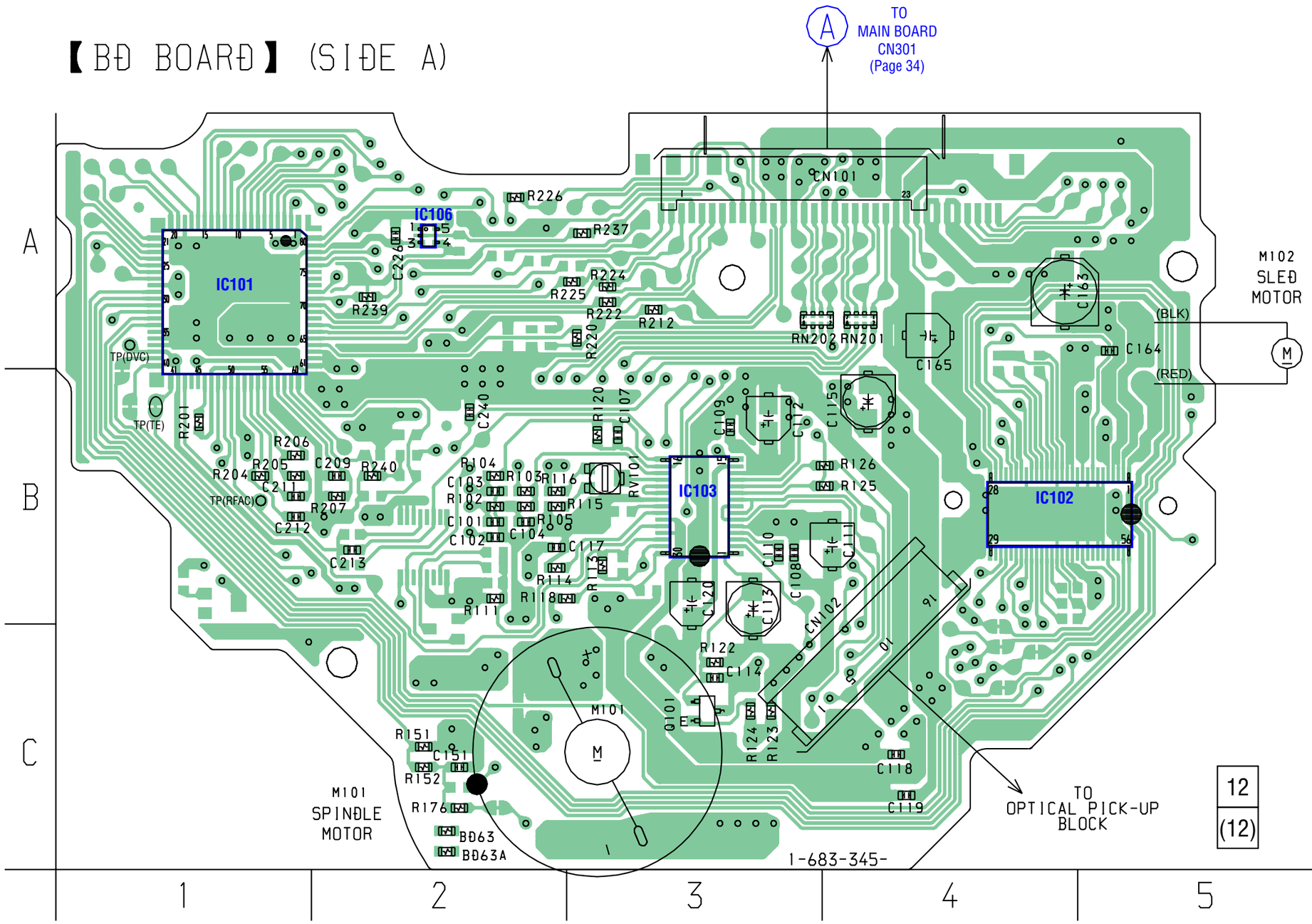


6-3. Schematic Diagram – BD Board – • See page 45 for IC Block Diagrams. • See page 46 for Wavefoms.



6-4. Printed Wiring Board – BD Board (Side A) –

• See page 28 for Circuit Boards Location.

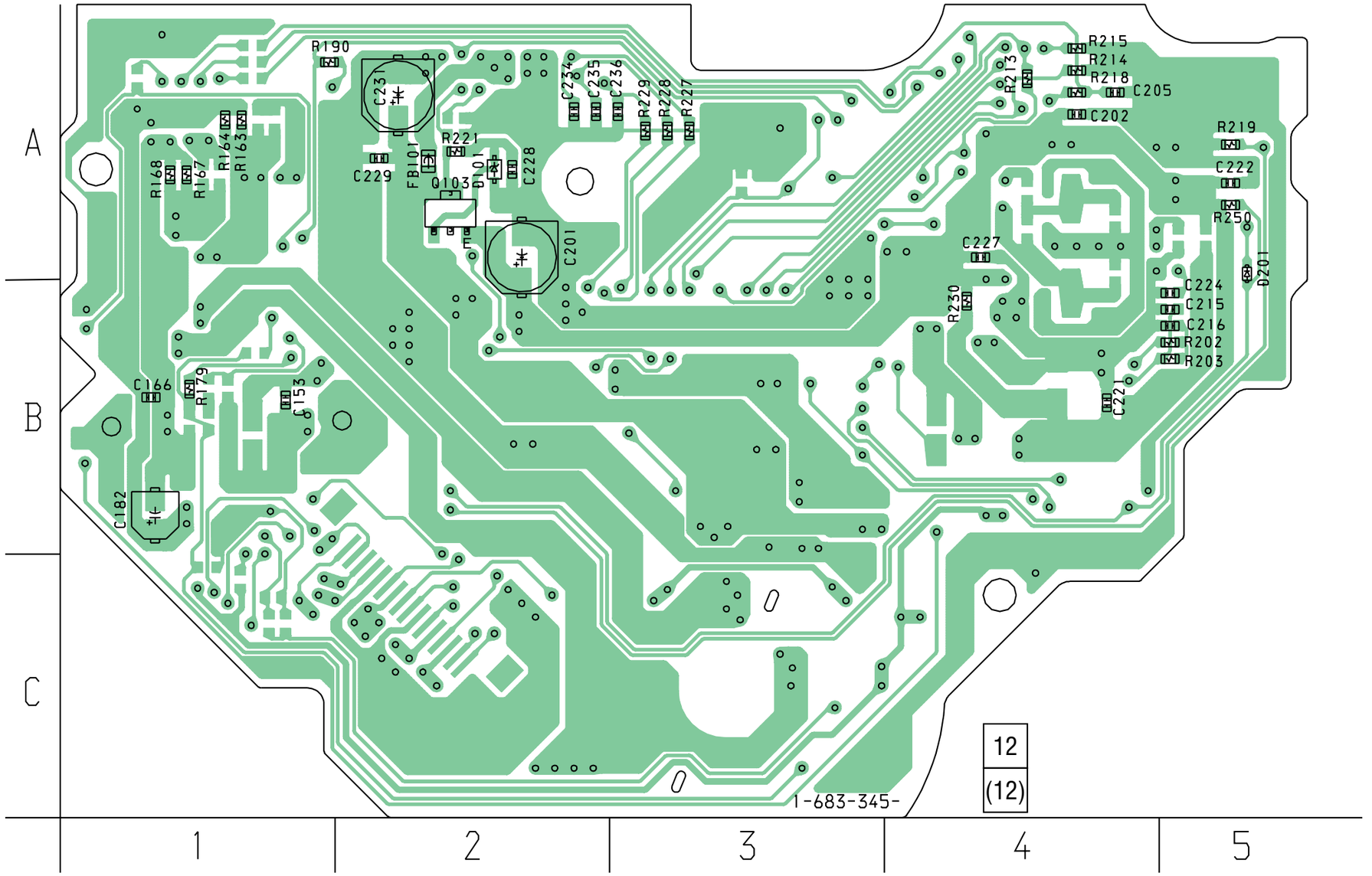


• **Semiconductor Location**

Ref. No.	Location
IC101	A-1
IC102	B-4
IC103	B-3
IC106	A-2
Q101	C-3

6-5. Printed Wiring Board – BD Board (Side B) – • See page 28 for Circuit Boards Location.

【BD BOARD】(SIDE B)

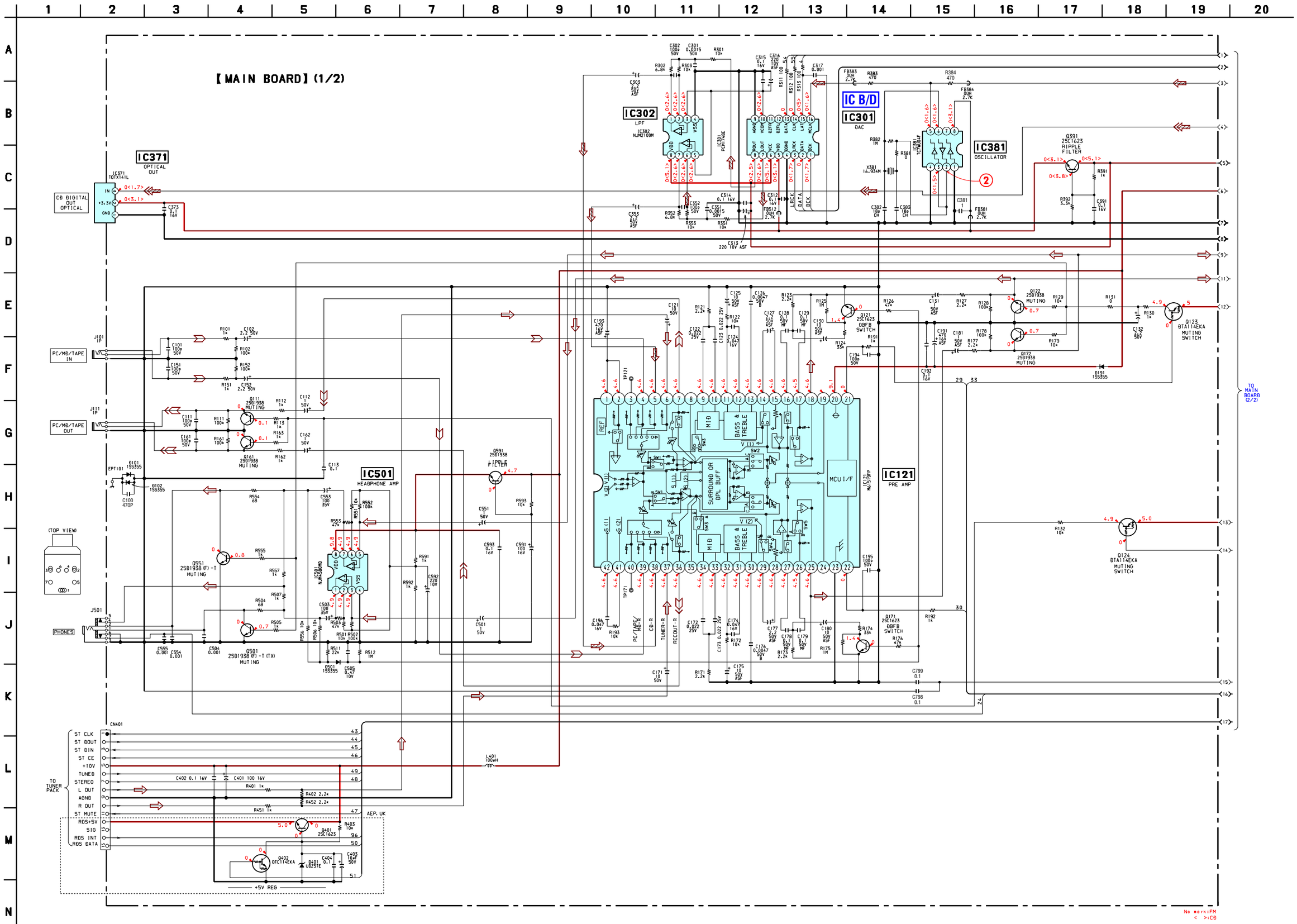


• **Semiconductor Location**

Ref. No.	Location
D201	B-5
Q103	A-2

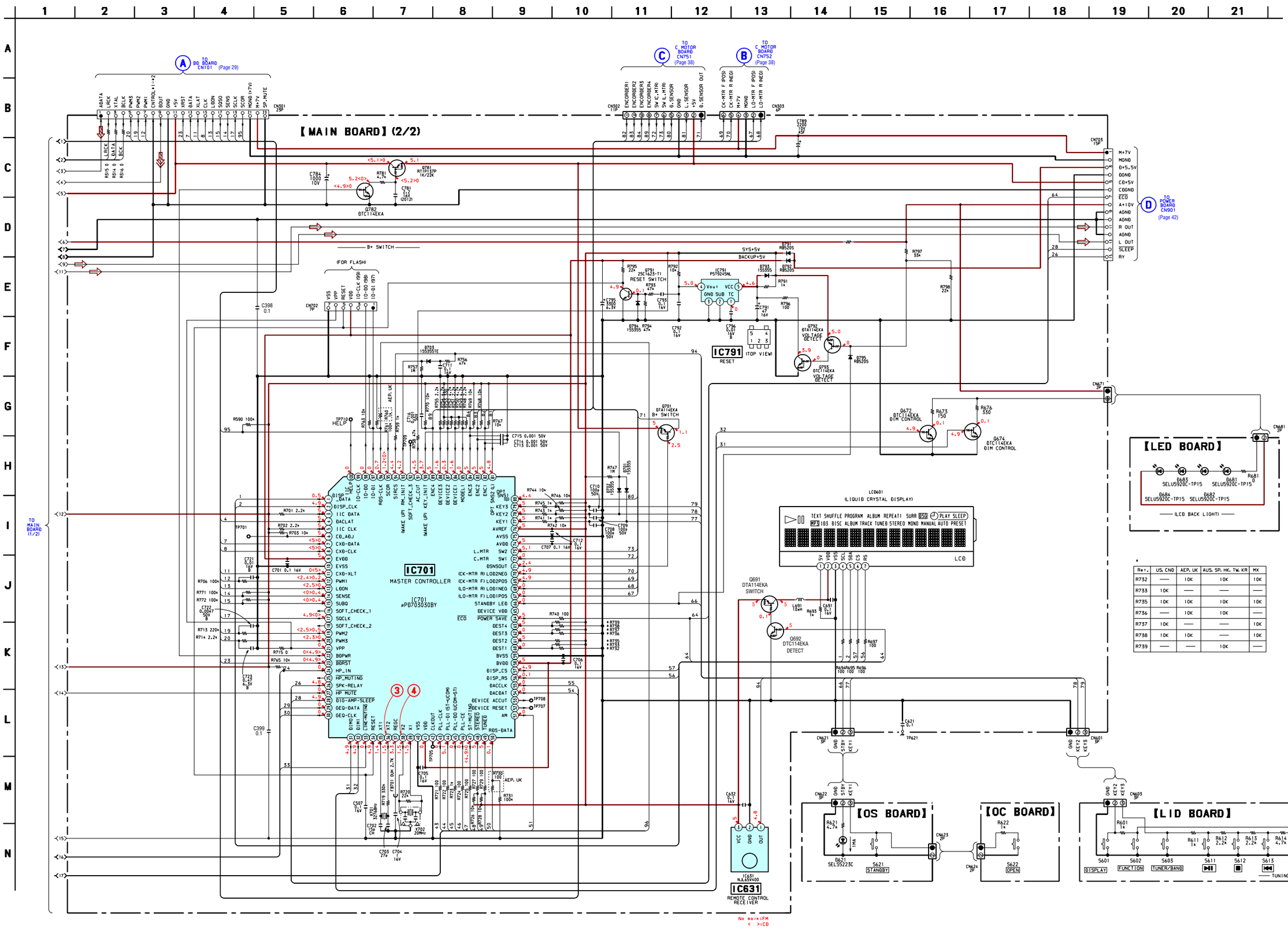
6-6. Schematic Diagram – MAIN Section (1/2) –

• See page 46 for IC Block Diagrams. • See page 46 for Waveforms.



6-7. Schematic Diagram – MAIN Section (2/2) –

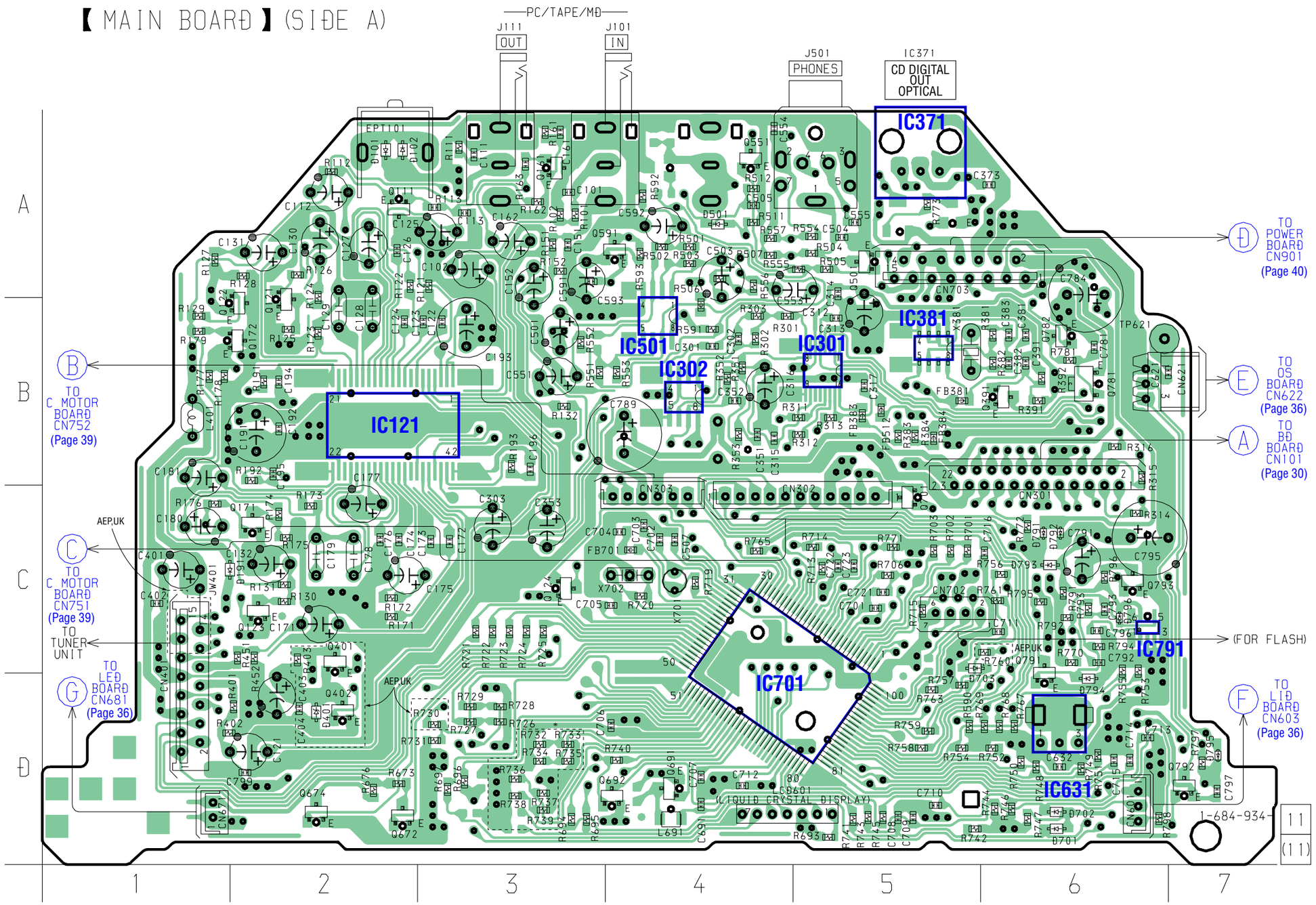
• See page 43 for IC Pin Function Description. • See page 46 for Wavefoms.



Ref.	US, CND	AEP, UK	AUS, SP, HK, TW, KR	MX
R732	—	10K	10K	10K
R733	10K	—	—	—
R735	10K	10K	10K	10K
R736	—	10K	10K	—
R737	10K	—	—	10K
R738	10K	10K	—	10K
R739	—	—	10K	—

6-8. Printed Wiring Board – MAIN Board (Side A) –

• See page 28 for Circuit Boards Location.



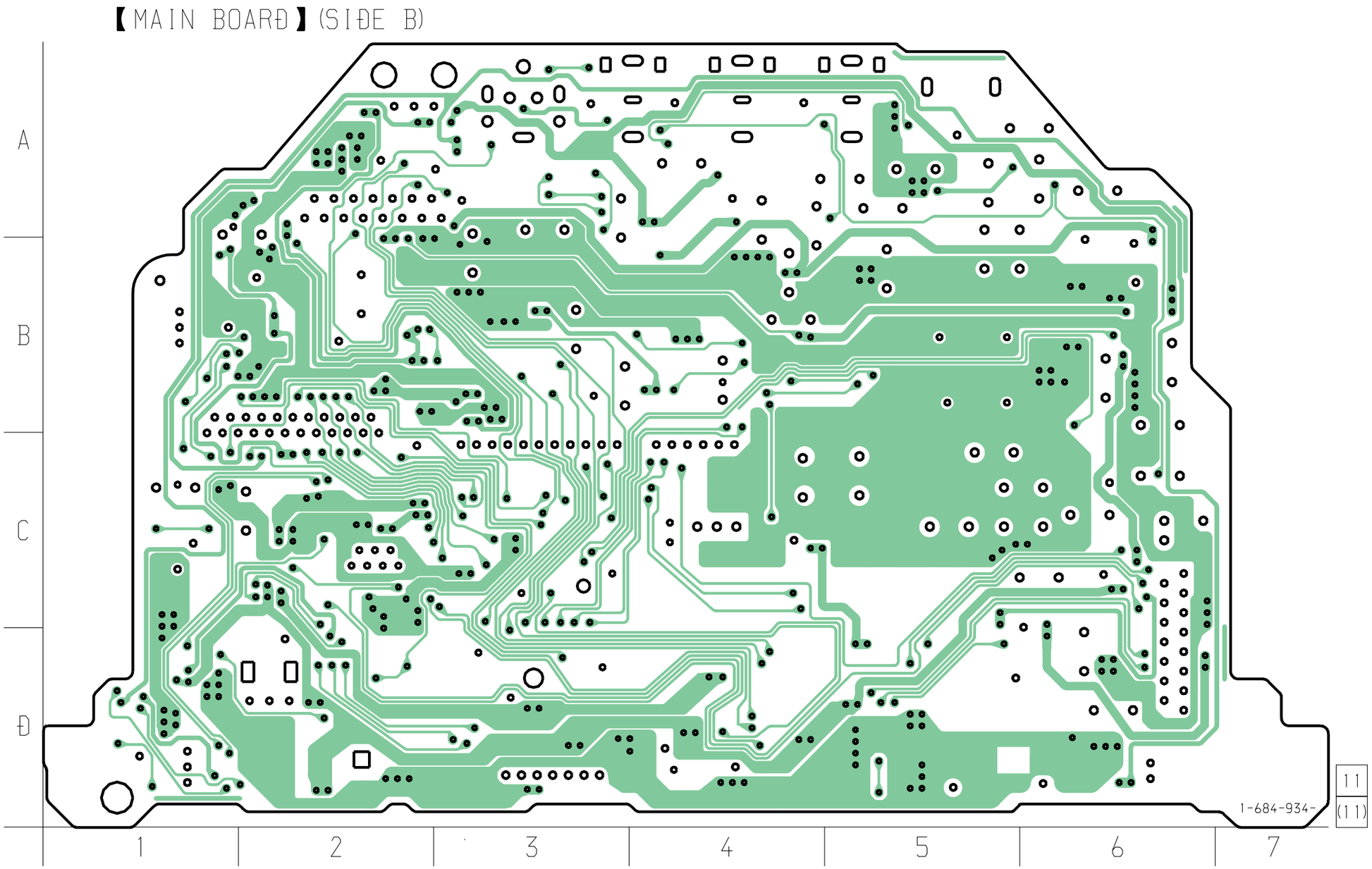
*

Ref.	US, CND	AEP, UK	AUS, SP, HK, TW, KR	MX
R732	—	10K	10K	10K
R733	10K	—	—	—
R735	10K	10K	10K	10K
R736	—	10K	10K	—
R737	10K	—	—	10K
R738	10K	10K	—	10K
R739	—	—	10K	—

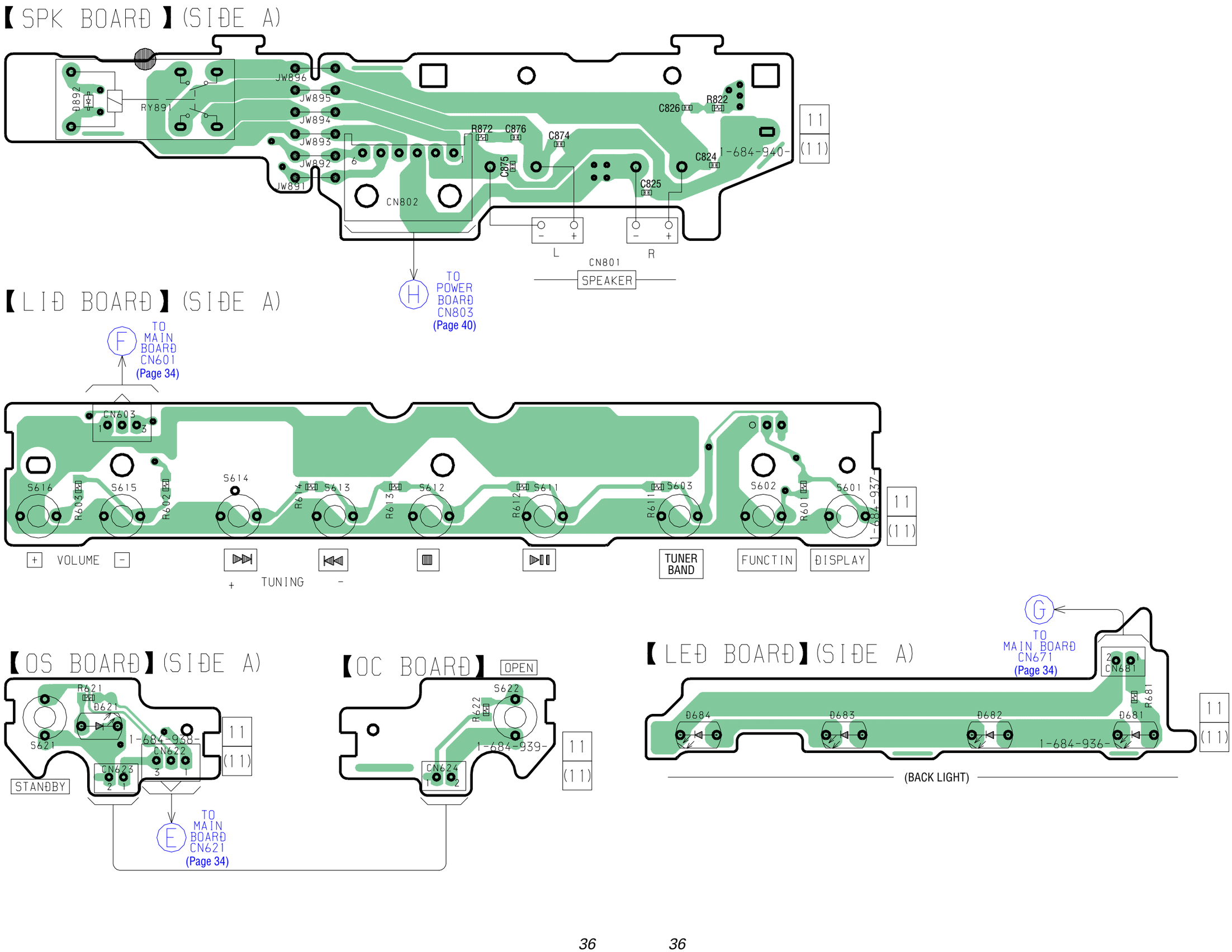
• **Semiconductor Location**

Ref. No.	Location
D101	A-2
D102	A-3
D191	C-1
D401	D-2
D501	A-4
D621	
D701	D-6
D702	D-6
D703	D-5
D791	C-6
D792	C-6
D793	C-6
D794	D-6
D795	D-7
IC121	B-2
IC301	B-5
IC302	B-4
IC371	A-5
IC381	B-5
IC501	B-4
IC631	D-6
IC701	C-4
IC791	C-6
Q111	A-2
Q121	B-2
Q122	B-2
Q123	C-3
Q124	C-3
Q161	A-3
Q171	C-2
Q172	B-2
Q391	B-6
Q401	C-2
Q402	D-2
Q501	A-5
Q551	A-4
Q591	A-4
Q672	D-2
Q674	D-2
Q691	D-4
Q692	D-4
Q701	C-5
Q781	B-6
Q782	B-6
Q791	D-6
Q792	D-7
Q793	C-6

6-9. Printed Wiring Board – MAIN Board (Side B) – • See page 28 for Circuit Boards Location.

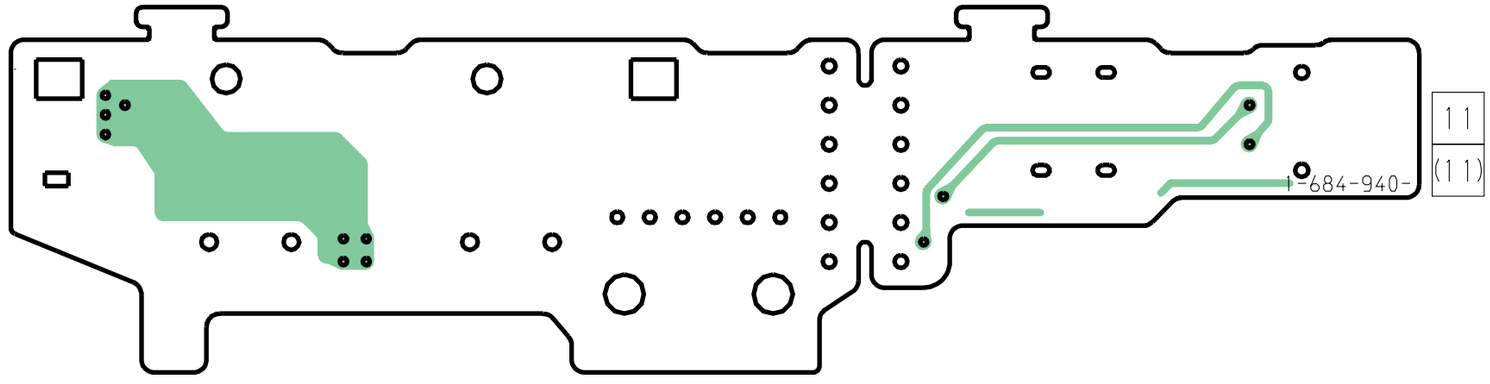


6-10. Printed Wiring Board – PANEL Section (Side A) – • See page 28 for Circuit Boards Location.

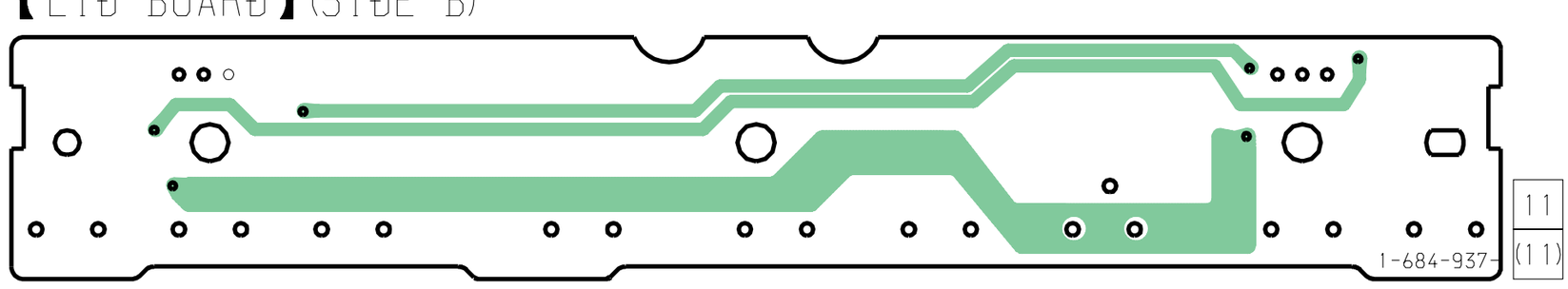


6-11. Printed Wiring Board – PANEL Section (Side B) – • See page 28 for Circuit Boards Location.

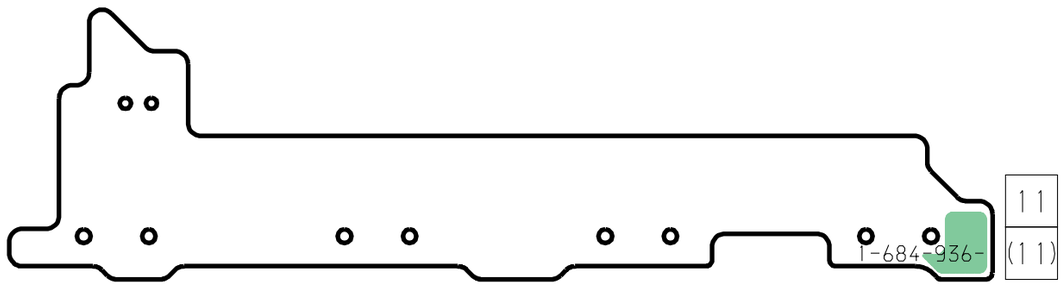
【SPK BOARD】(SIDE B)



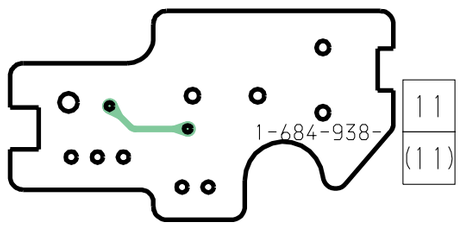
【LID BOARD】(SIDE B)



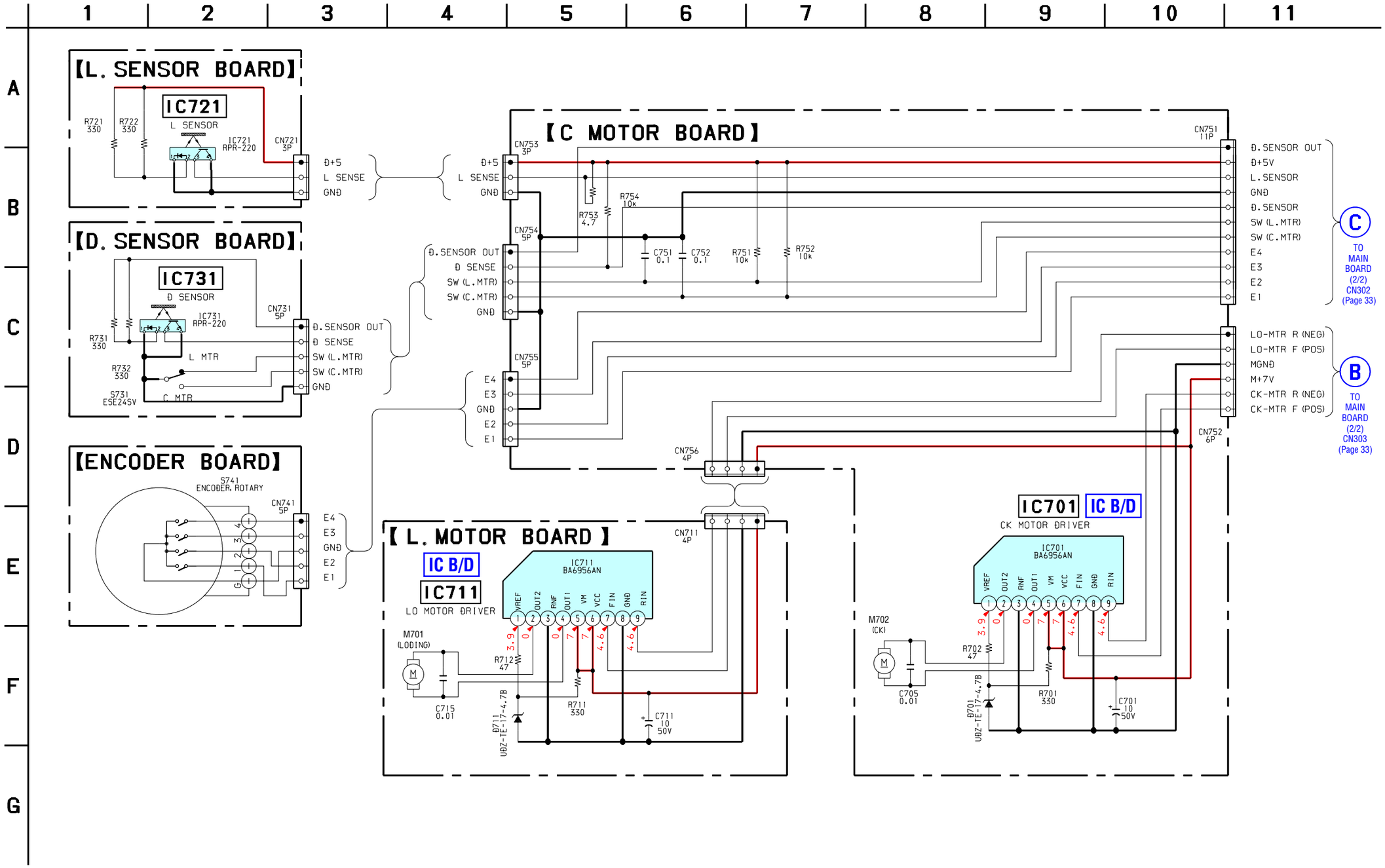
【LED BOARD】(SIDE B)



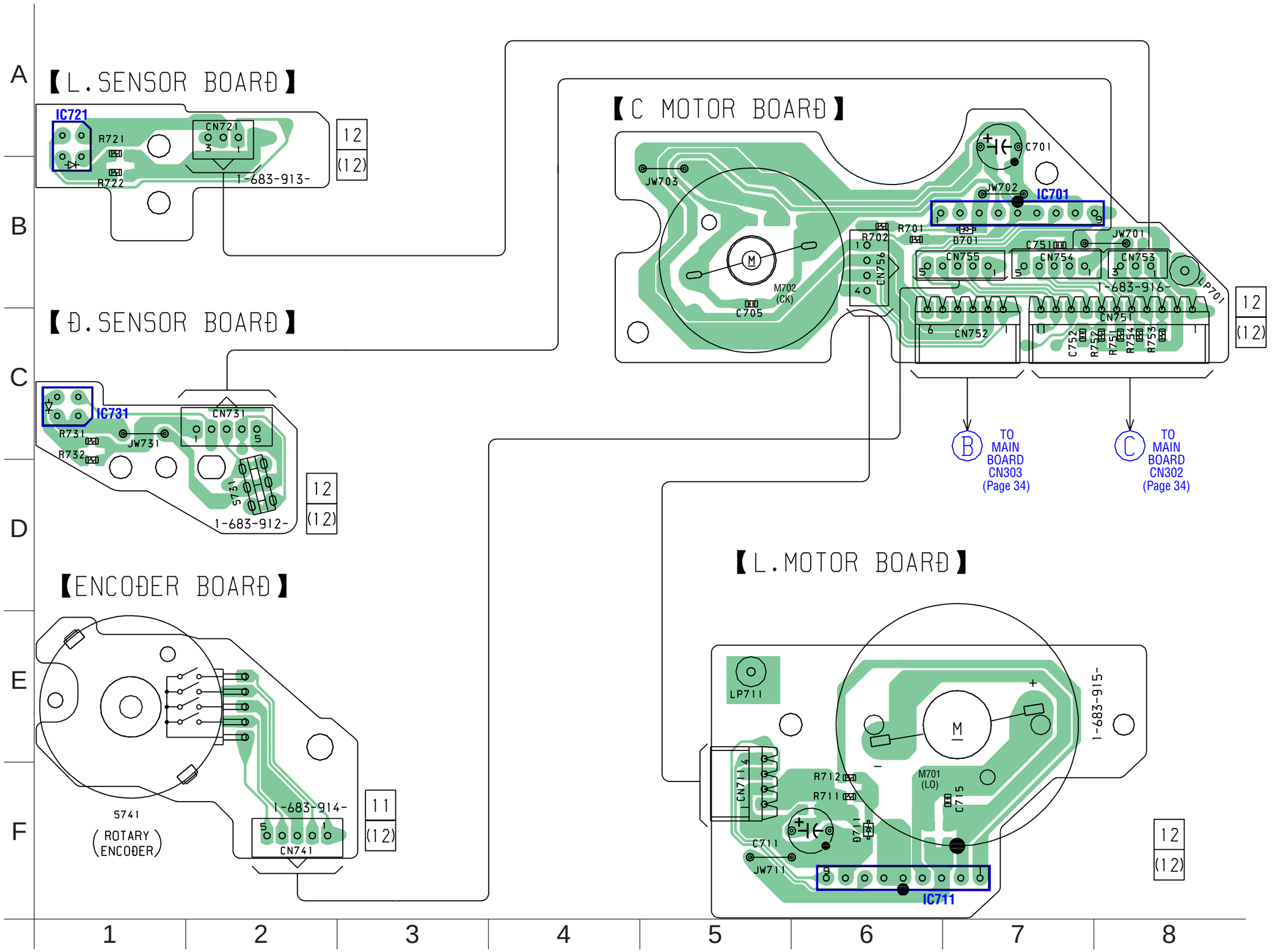
【OS BOARD】(SIDE B)



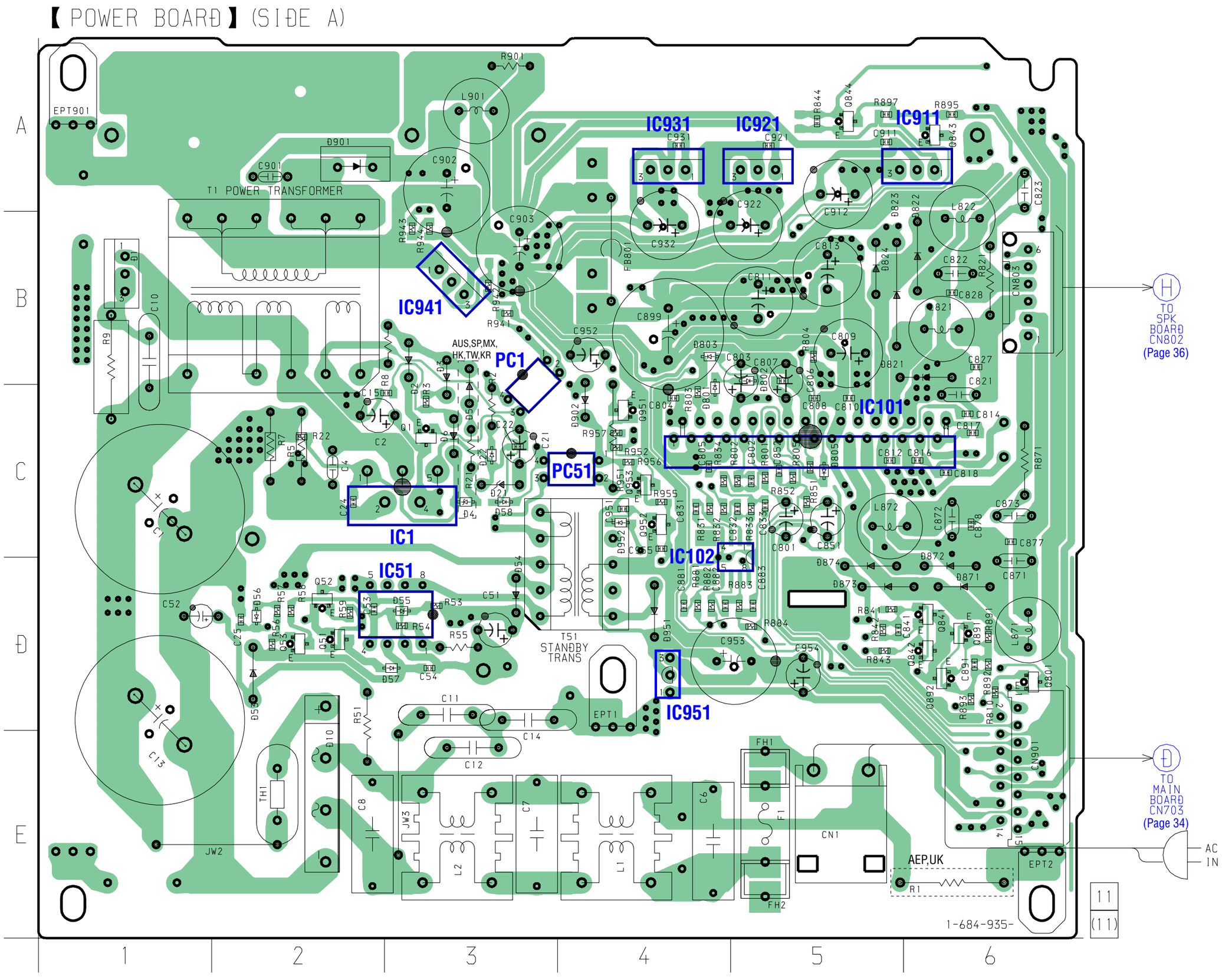
6-12. Schematic Diagram – MOTOR Section – • See page 45 for IC Block Diagrams.



6-13. Printed Wiring Board – MOTOR Section – • See page 28 for Circuit Boards Location.



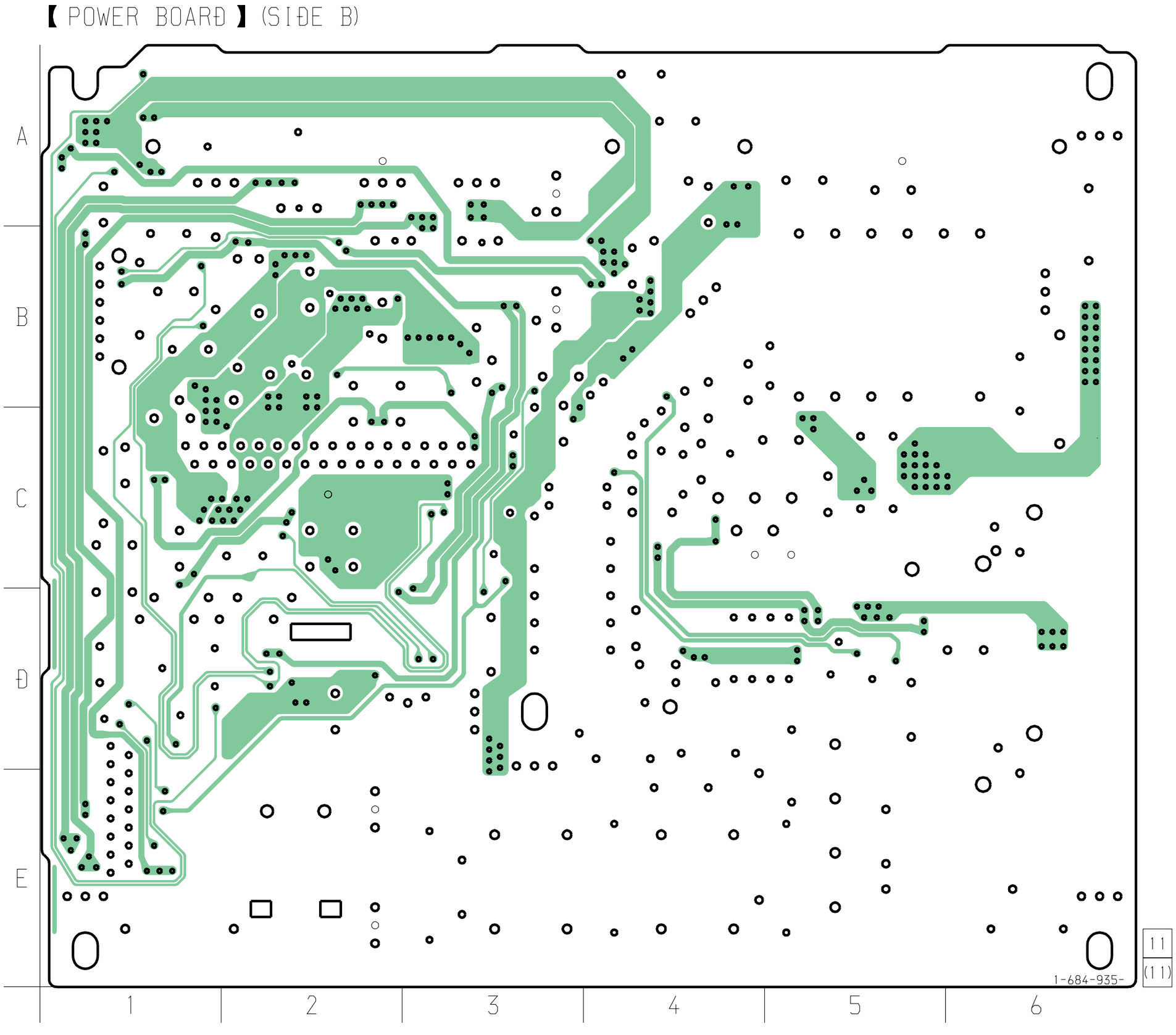
6-14. Printed Wiring Board – POWER Board (Side A) – • See page 28 for Circuit Boards Location.



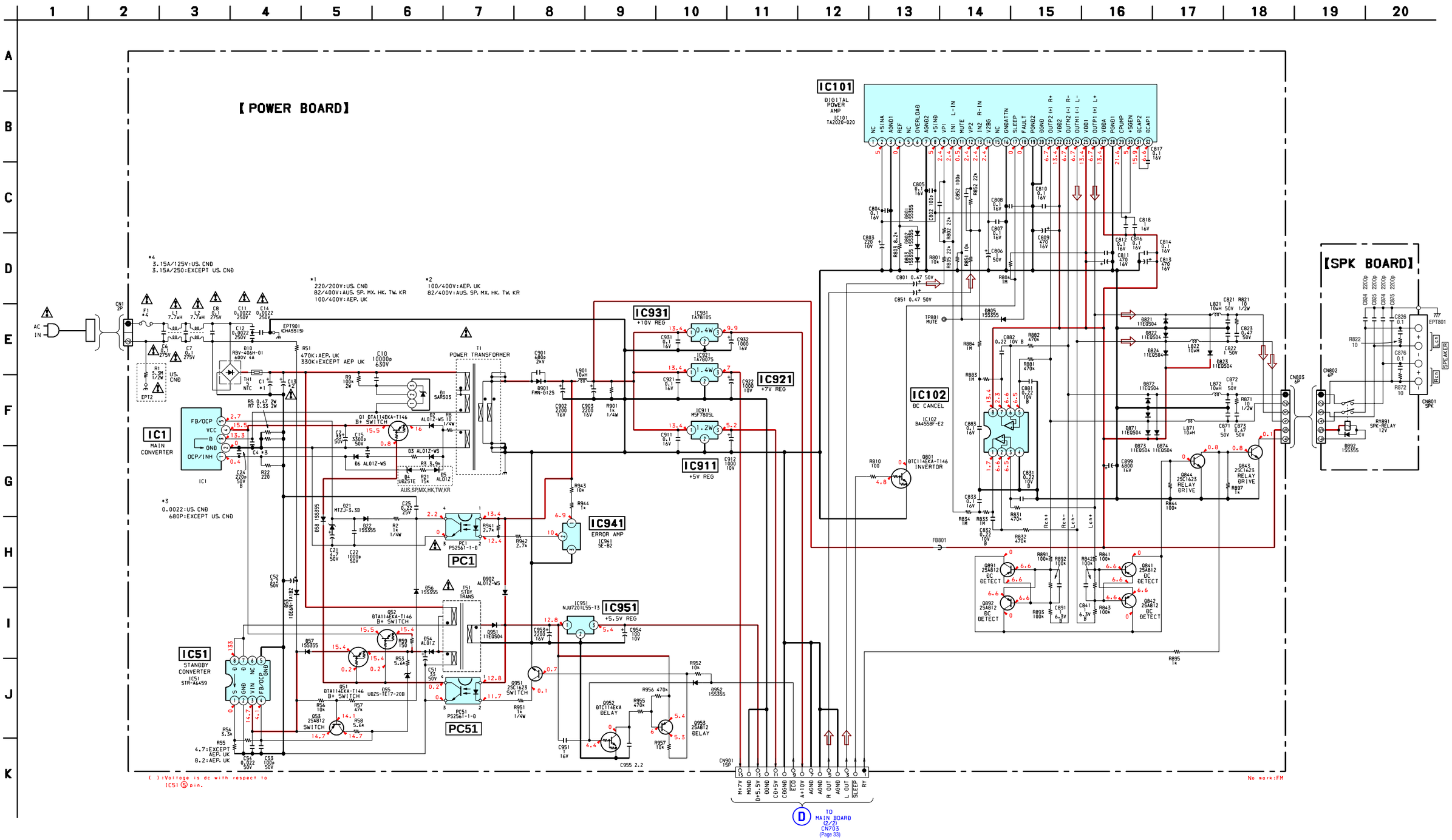
- **Semiconductor Location**

Ref. No.	Location
D1	B-1
D2	C-3
D3	C-3
D4	C-3
D5	C-3
D6	C-6
D10	E-2
D21	C-3
D22	C-3
D53	D-2
D54	D-3
D55	D-3
D56	D-2
D57	D-3
D58	C-3
D801	B-5
D802	B-5
D803	B-4
D805	C-5
D821	B-5
D822	A-6
D823	A-6
D824	B-6
D871	C-6
D872	C-6
D873	C-5
D874	C-5
D901	A-2
D902	C-4
D951	D-4
D952	C-4
IC1	C-3
IC51	D-3
IC101	B-5
IC102	C-4
IC911	A-6
IC921	A-5
IC931	A-4
IC941	B-3
IC951	D-4
Q1	C-3
Q51	D-1
Q52	D-2
Q53	D-2
Q801	D-6
Q841	D-6
Q842	D-6
Q843	A-6
Q844	A-5
Q891	D-6
Q892	D-6
Q951	C-4
Q952	C-4
Q953	C-4

6-15. Printed Wiring Board – POWER Board (Side B) – • See page 28 for Circuit Boards Location.



6-16. Schematic Diagram – POWER Section –



6-17. IC Pin Function Description

• IC701 μPD703030BYGF-M02-3BA Master Controller (Main Board)

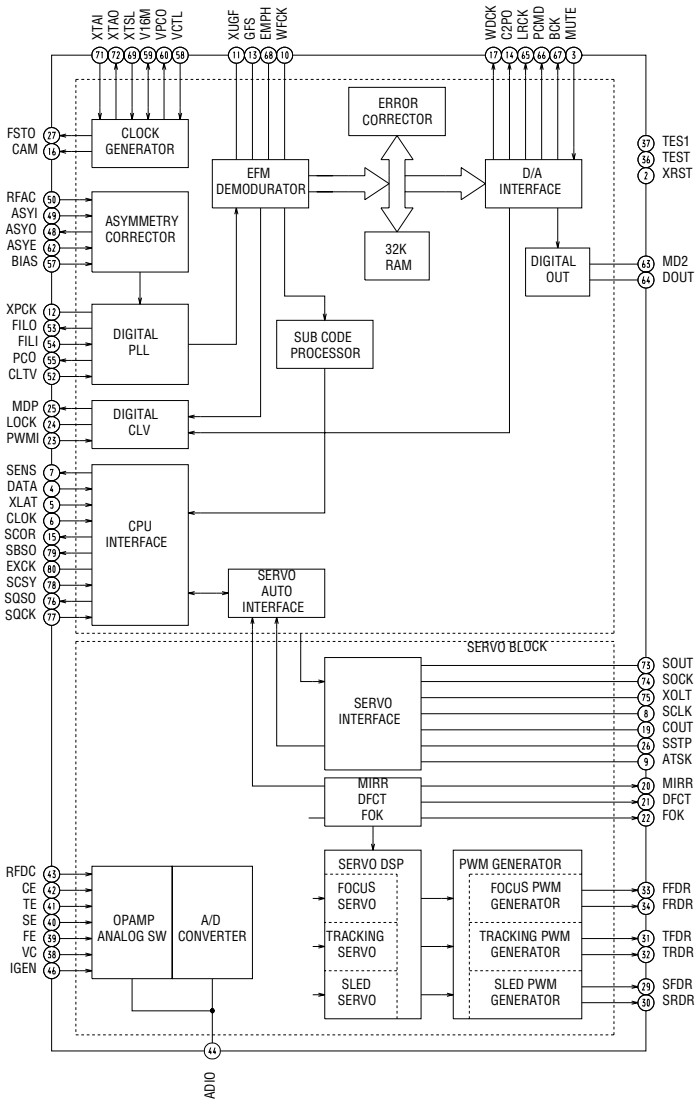
Pin No.	Pin Name	I/O	Description
1	DISP_DATA	O	Data output to the LCD601
2	DISP_CLK	O	Clock output to the LCD601
3	IIC DATA	I/O	IIC data input/output (fixed at "H")
4	DACLAT	O	Latch signal output to the DAC (IC301)
5	IIC CLK	I/O	IIC clock input/output (fixed at "H")
6	CD_ADJ	I	CD adjustment mode input (fixed at "H")
7	CXD-DATA	O	Data output to the CXD3068Q (IC101)
8	CXD-CLK	O	Clock output to the CXD3068Q (IC101)
9	EVDD	—	Power supply (+5V)
10	EVSS	—	Ground
11	CXD-XLT	O	Latch signal output to the CXD3068Q (IC101)
12	PWM1	O	PWM1 signal output
13	LDON	O	Laser power control signal output
14	SENSE	I	SENSE signal input from the CXD3068Q (IC101)
15	SUBQ	I	SUBQ data input from the CXD3068Q (IC101)
16	SOFT_CHEK_1	O	Check terminal (open)
17	SQCLK	O	SUBQ clock output to the CXD3068Q (IC101)
18	SOFT_CHECK_2	O	Check terminal (open)
19	PWM2	O	PWM2 signal output
20	PWM3	O	PWM3 signal output
21	VPP	—	Internal connection/power for writing to the flash ROM
22	BDPWR	O	BD power control signal output
23	$\overline{\text{BDRST}}$	O	BD reset signal output
24	HP_IN	I	Headphone detection signal input
25	$\overline{\text{HP\_MUTING}}$	O	Not used (open)
26	SPK-RELAY	O	Speaker relay control signal output
27	$\overline{\text{HP MUTE}}$	O	PC/TAPE/MD output muting signal output
28	$\overline{\text{DIG-AMP-SLEEP}}$	O	Sleep signal output to the digital power amplifier (IC101)
29	GEQ-DATA	O	Data output to the pre-amplifier (IC121)
30	GEQ-CLK	O	Clock output to the pre-amplifier (IC121)
31, 32	DIM0, DIM1	O	Back light control signal output
33	$\overline{\text{LINE-MUTING}}$	O	Line muting signal output
34	RESET	I	System reset signal input
35	XT1	I	Sub clock input
36	XT2	O	Sub clock output
37	REGC	—	Capacitor terminal for stabilizing the regulator output
38	X2	O	Main clock output
39	X1	I	Main clock input
40	VSS	—	Ground
41	VDD	—	Power supply (+5V)
42	CLKOUT	O	Clock output terminal (open)
43	PLL-CLK	O	Clock output for the PLL for the tuner
44	PLL-DI(ST→UCOM)	I	Data input from the PLL for the tuner
45	PLL-DO(UCOM→ST)	O	Data output to the PLL for the tuner
46	PLL-CE	O	Chip enable signal output the PLL for the tuner
47	ST-MUTING	O	Muting signal output for the tuner
48	$\overline{\text{STEREO}}$	I	Stereo detection signal input
49	$\overline{\text{TUNED}}$	I	Tuner tuning signal input
50	RDS-DATA	I	RDS data input
51	AM	O	AM signal output for the RDS noise reduction

Pin No.	Pin Name	I/O	Description
52	DEVICE RESET	O	Device reset signal output (open)
53	DEVICE ACCUT	O	Device AC cut signal output (open)
54	DACDATA	O	Data output to the DAC (IC301)
55	DACCLK	O	Clock output to the DAC (IC301)
56	DISP_RS	O	Reset signal output to the LCD601
57	DISP_CS	O	Chip select signal output to the LCD601
58	BVDD	—	Power supply (+5v)
59	BVSS	—	Ground
60 to 63	DEST1 to DEST4	I	Destination setting terminal 1 to 4 (refer to destination, model and device sheet)
64	$\overline{\text{POWER SAVE}}$	O	Power save control signal output (“H” : clock display, “L” : eco mode)
65	DEVICE VDD	O	Device power control signal output
66	STANDBY LED	O	Standby LED control signal output
67	(LO-MTR F) LOD1POS	O	Loading motor control signal output (+)
68	(LO-MTR R) LOD1NEG	O	Loading motor control signal output (–)
69	(CK-MTR F) LOD2POS	O	Chucking motor control signal output (+)
70	(CK-MTR R) LOC2NEG	O	Chucking motor control signal output (–)
71	DSNSOUT	O	D. sensor output enable signal output
72	C.MTR SW1	I	Chucking motor switch signal input
73	L.MTR SW2	I	Loading motor switch signal input
74	AVDD	—	Power supply (+5V)
75	AVSS	—	Ground
76	AVREF	I	Analog reference voltage input
77 to 79	KEY1 to KEY3	I	Key signal input 1 to 3
80	OPTSNS1(D)	I	D. sensor signal input
81	OPTSNS2(L)	I	L. sensor signal input
82 to 84	ENC1 to ENC3	I	Encoder 1 to 3 signal input
85	MODEL1	I	Model setting input teminal
86	DEVICE1	I	Device setting input teminal (DISPLAY)
87	DEVICE2	I	Device setting input teminal (IO)
88	DEVICE3	I	Device setting input teminal (CD)
89	ENC4	I	Encoder 4 signal input
90	(WAKE UP) KEY INT	I	Key interrupt signal input
91	AC_CUT	I	AC off detection signal input
92	SOFT_CHECK_3	O	Check terminal (open)
93	(WAKE UP) RM_INT	I	Remote control interrupt signal input
94	SIRCS	I	Data input from the remote control receiver
95	SCOR	I	Subcode Q sync detection signal input from the CXD3068Q (IC101)
96	RDS-CLK	I	RDS clock input
97	IO-DI	I	Flash ROM data input
98	IO-DO	O	Flash ROM data output
99	IO-CLK	I	Flash ROM clock input (open)
100	IIC HELP	O	IIC-HELP signal output (open)

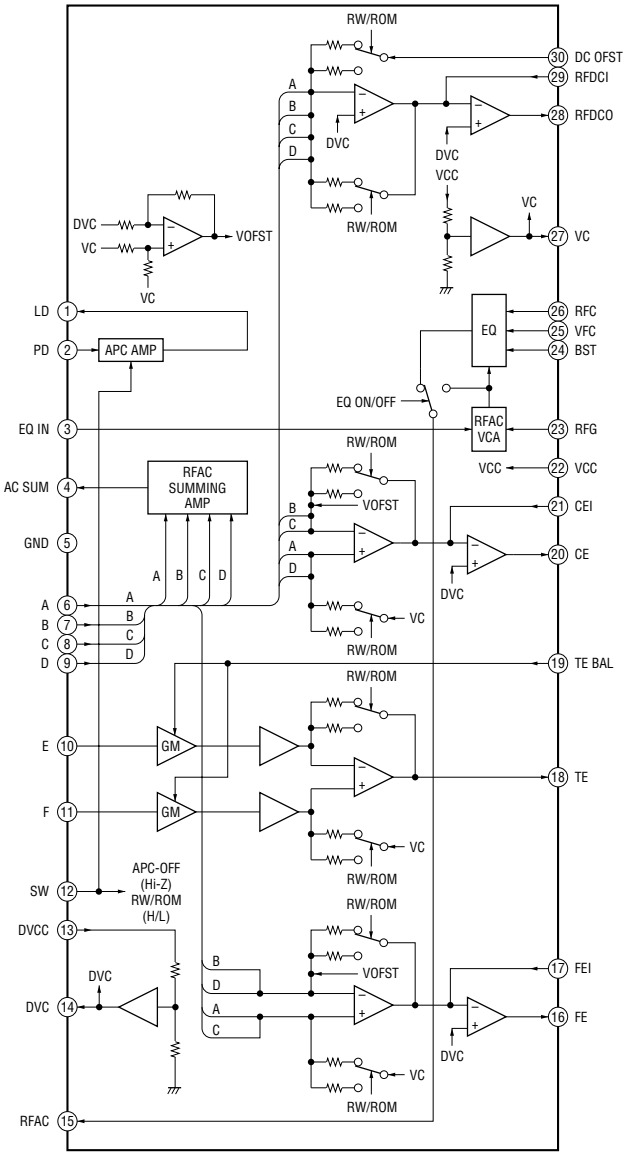
• IC Block Diagrams

– BD BOARD –

IC101 CXD3068Q



IC103 CXA2581N-T4

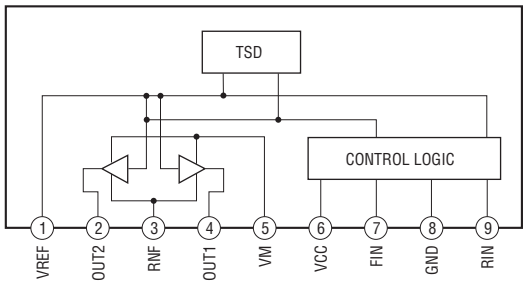


– C MOTOR BOARD –

IC701 BA6956AN

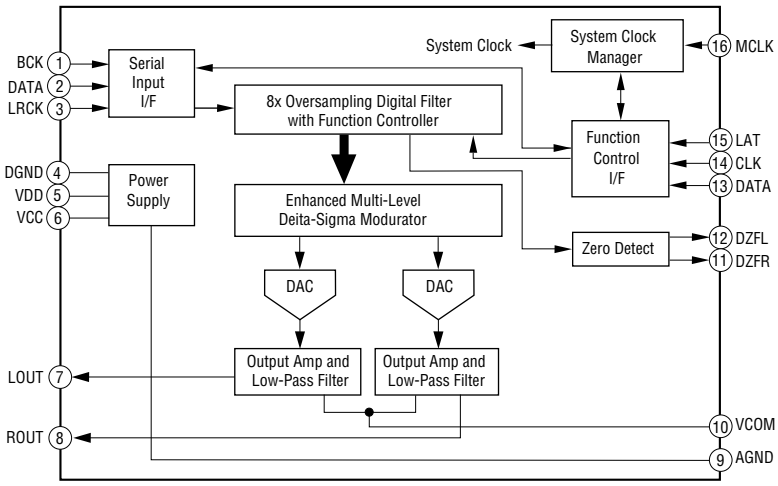
– L.MOTOR BOARD –

IC711 BA6956AN

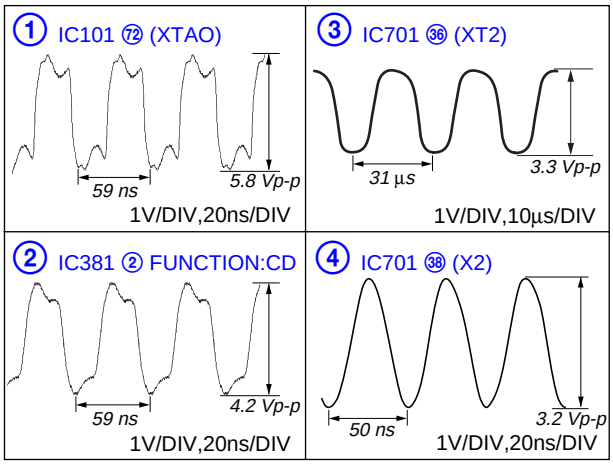


– MAIN BOARD –

IC301 PCM1748E/2K



• Waveforms



SECTION 7
EXPLODED VIEWS

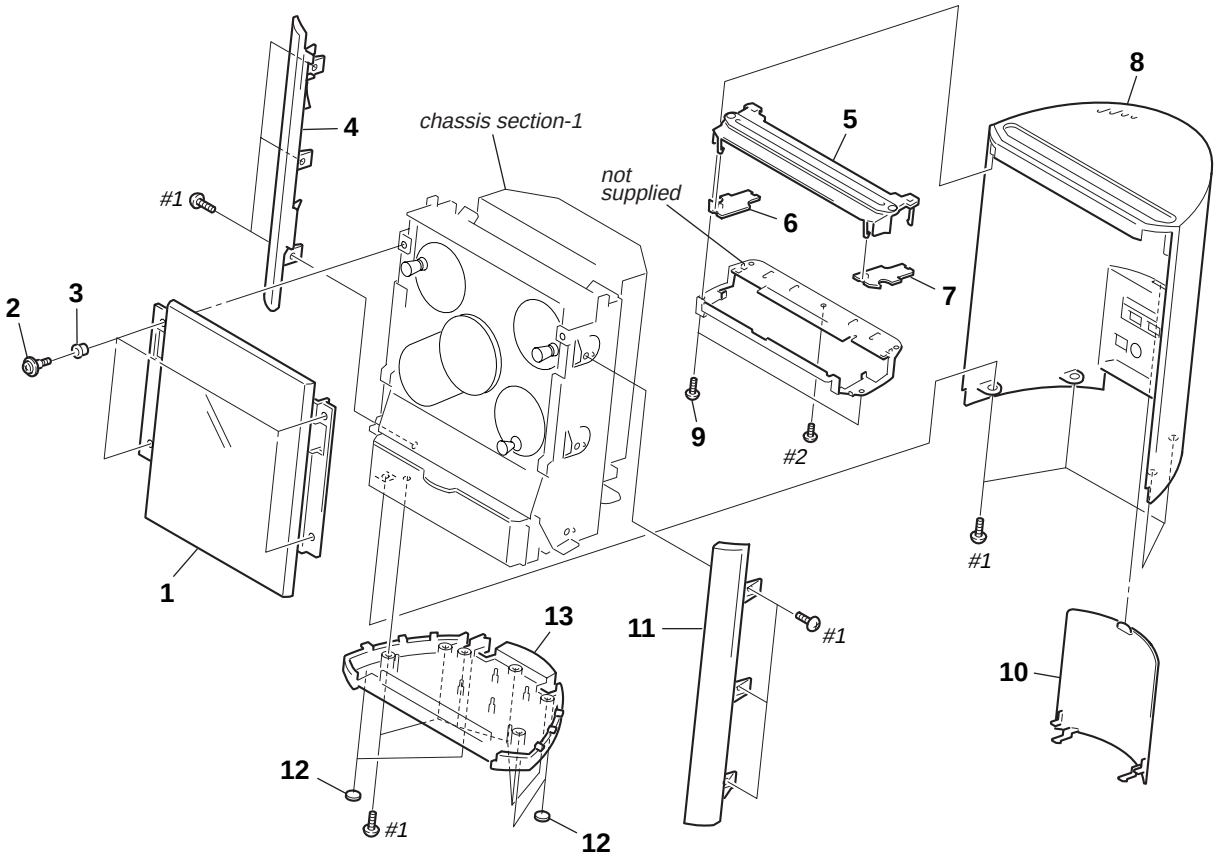
NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  MX : Mexican model.
  AUS : Australian model.
  SP : Singapore model.
  HK : Hong Kong model.
  TW : Taiwan model.
  KR : Korean model
  CND : Canadian model.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

以阴影和⚠标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

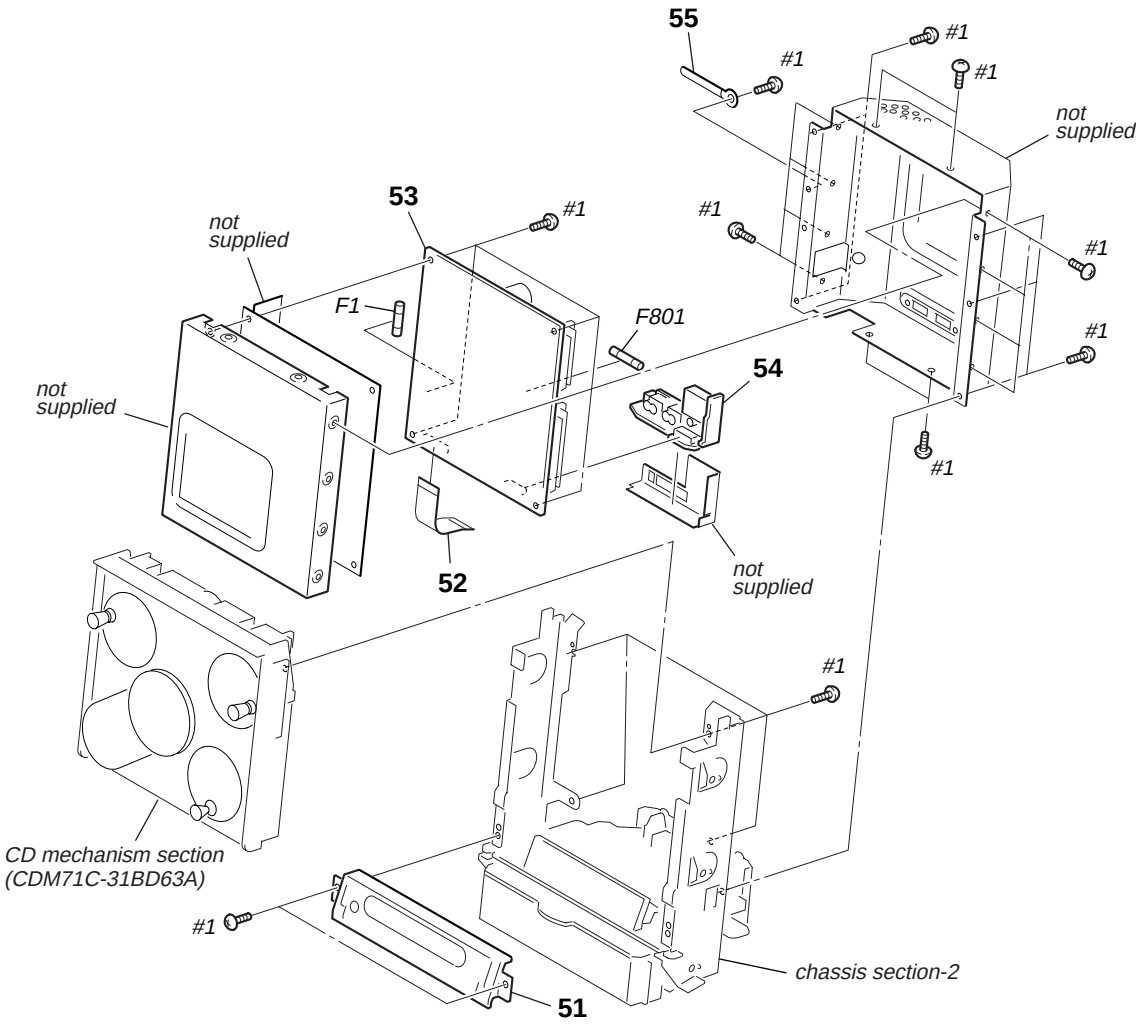
7-1. Case Section



Ref. No.	Part No.	Description	Remarks
1	X-4954-715-1	WINDOW ASSY (U), GLASS	
2	4-989-494-12	SCREW (SLIDER), STEP	
3	4-240-304-01	BUSHING (BRACKET)	
4	4-240-308-01	PLATE (L), SIDE	
5	X-4954-719-1	DISC ASSY, GUIDE	
6	1-684-938-11	OS BOARD	
7	1-684-939-11	OC BOARD	
8	4-240-323-01	CASE (US,CND)	
8	4-240-323-11	CASE (AEP,UK)	

Ref. No.	Part No.	Description	Remarks
8	4-240-323-21	CASE (AUS,SP,MX,HK,TW,KR)	
9	4-218-253-21	SCREW (M2.6), +BTTP	
10	4-240-302-01	COVER (BACK)	
11	4-240-309-01	PLATE (R), SIDE	
12	4-240-321-01	FOOT	
13	4-240-301-01	COVER (BOTTOM)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-534-14	SCREW +BTP 2.6X8 TYPE2 N-S	

7-2. Chassis Section-1

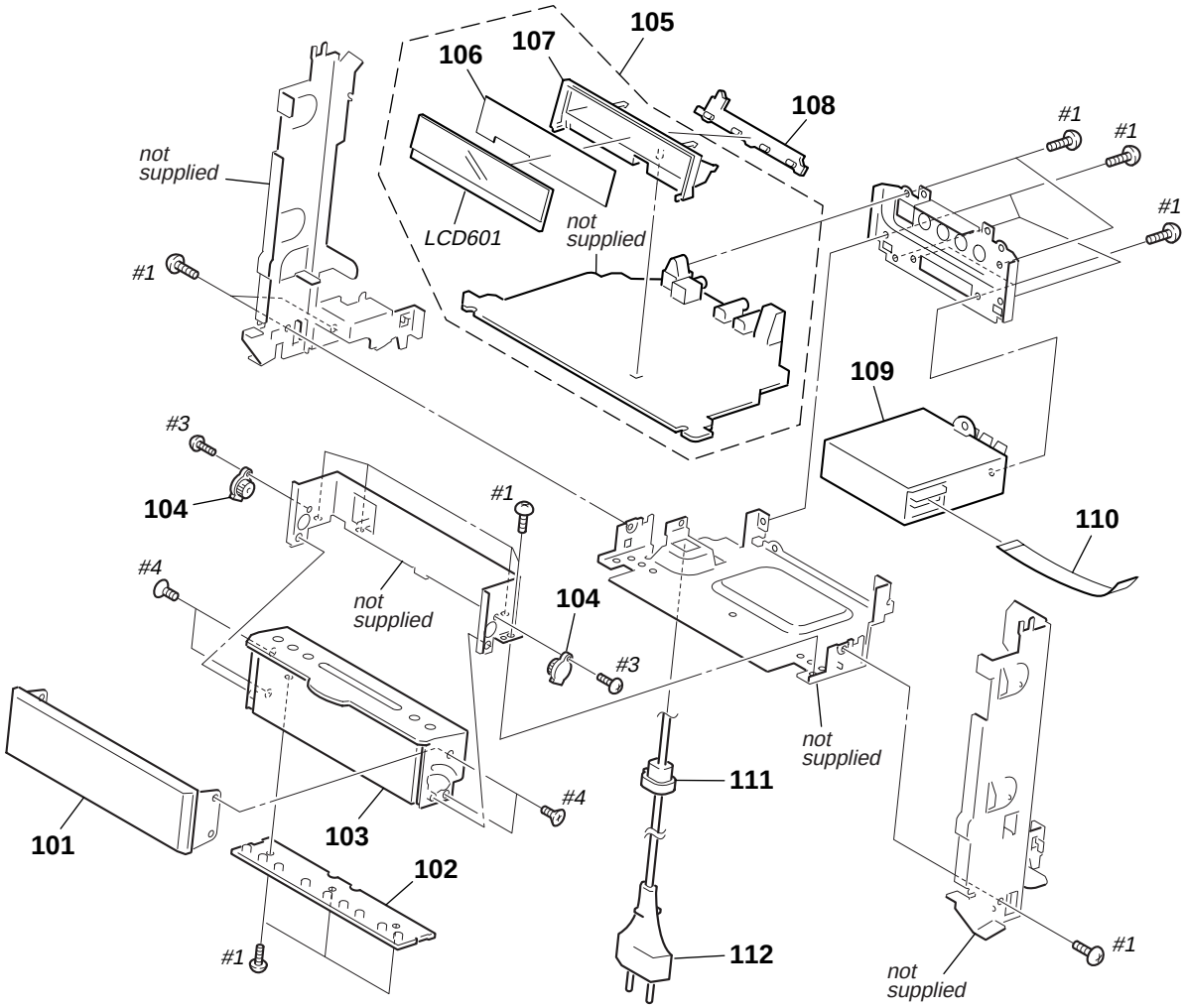


Ref. No.	Part No.	Description	Remarks
51	X-4954-720-1	PANEL ASSY, FRONT	
52	1-773-001-11	WIRE (FLAT TYPE) (15 CORE)	
53	A-4676-617-A	POWER BOARD, COMPLETE (US,CND)	
53	A-4676-644-A	POWER BOARD, COMPLETE (AEP,UK)	
53	A-4676-650-A	POWER BOARD, COMPLETE (AUS,SP,MX,HK,TW,KR)	
54	1-684-940-11	SPK BOARD	

Ref. No.	Part No.	Description	Remarks
* 55	3-703-150-11	CLAMP	
⚠F1	1-533-451-11	FUSE, GLASS TUBE (DIA. 5) 3.15A/125V(US,CND)	
⚠F1	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) 3.15A/250V(TIME-LAG) (AEP,UK,AUS,SP,MX,HK,TW,KR)	
⚠F801	1-533-453-11	FUSE, GLASS TUBE (DIA. 5) 5A/125V	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

7-3. Chassis Section-2

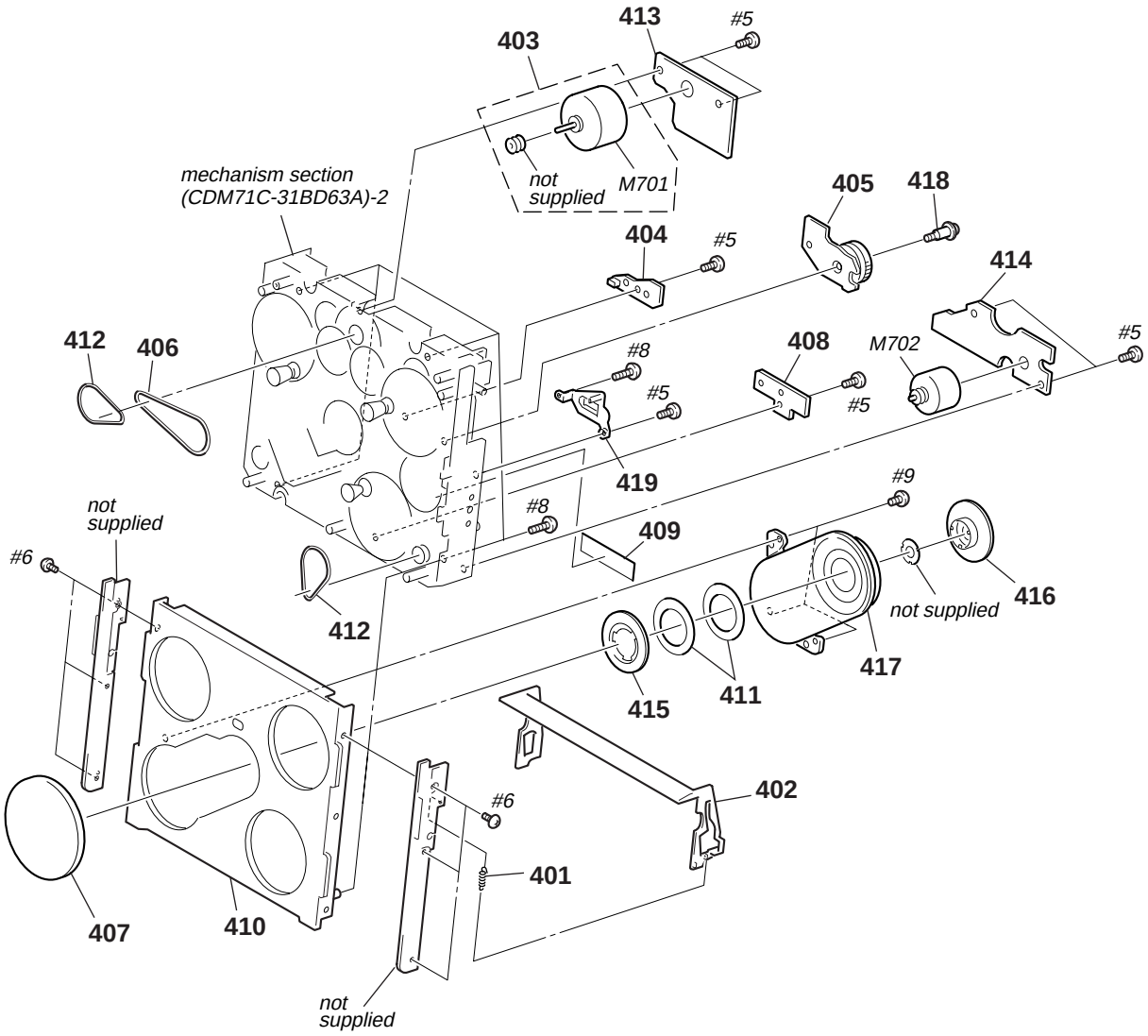


Ref. No.	Part No.	Description	Remarks
101	X-4954-716-1	WINDOW ASSY (L), GLASS	
102	1-684-937-11	LID BOARD	
103	X-4954-718-1	BUTTON ASSY, CASE	
104	3-239-275-01	DAMPER (S), SMALL	
105	A-4676-614-A	MAIN BOARD, COMPLETE (US,CND)	
105	A-4676-642-A	MAIN BOARD, COMPLETE (AEP,UK)	
105	A-4676-648-A	MAIN BOARD, COMPLETE (AUS,SP,HK,TW,KR)	
105	A-4729-141-A	MAIN BOARD, COMPLETE (MX)	
106	4-240-311-01	ILLUMINATOR	
107	4-240-310-01	HOLDER, LCD	
108	1-684-936-11	LED BOARD	
109	1-693-529-11	TUNER (FM/AM) (AEP,UK)	
109	1-693-531-71	TUNER (FM/AM) (AUS,SP,MX,HK,TW)	
109	1-693-534-11	TUNER (FM/AM) (US,CND)	
109	1-693-538-11	TUNER (FM/AM) (KR)	

Ref. No.	Part No.	Description	Remarks
110	1-769-940-11	WIRE (FLAT TYPE) (11 CORE) (EXCEPT AEP,UK)	
110	1-773-004-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK)	
111	4-966-266-01	BUSHING (S) (FBS002), CORD (MX)	
111	4-966-267-04	BUSHING (FBS001), CORD (EXCEPT MX)	
⚠112	1-769-079-11	CORD, POWER (KR)	
⚠112	1-775-790-51	CORD, POWER (AUS)	
⚠112	1-777-071-62	CORD, POWER (AEP,UK,SP,HK,TW)	
⚠112	1-783-531-31	CORD, POWER (US,CND)	
⚠112	1-792-382-21	CORD, POWER (MX)	
LCD601	1-804-713-11	DISPLAY PANEL, LIQUID CRYSTAL	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#3	7-685-852-04	SCREW +BVTT 2X5 (S)	
#4	7-685-233-19	SCREW +KTP 2.6X6 TYPE2 SLIT	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

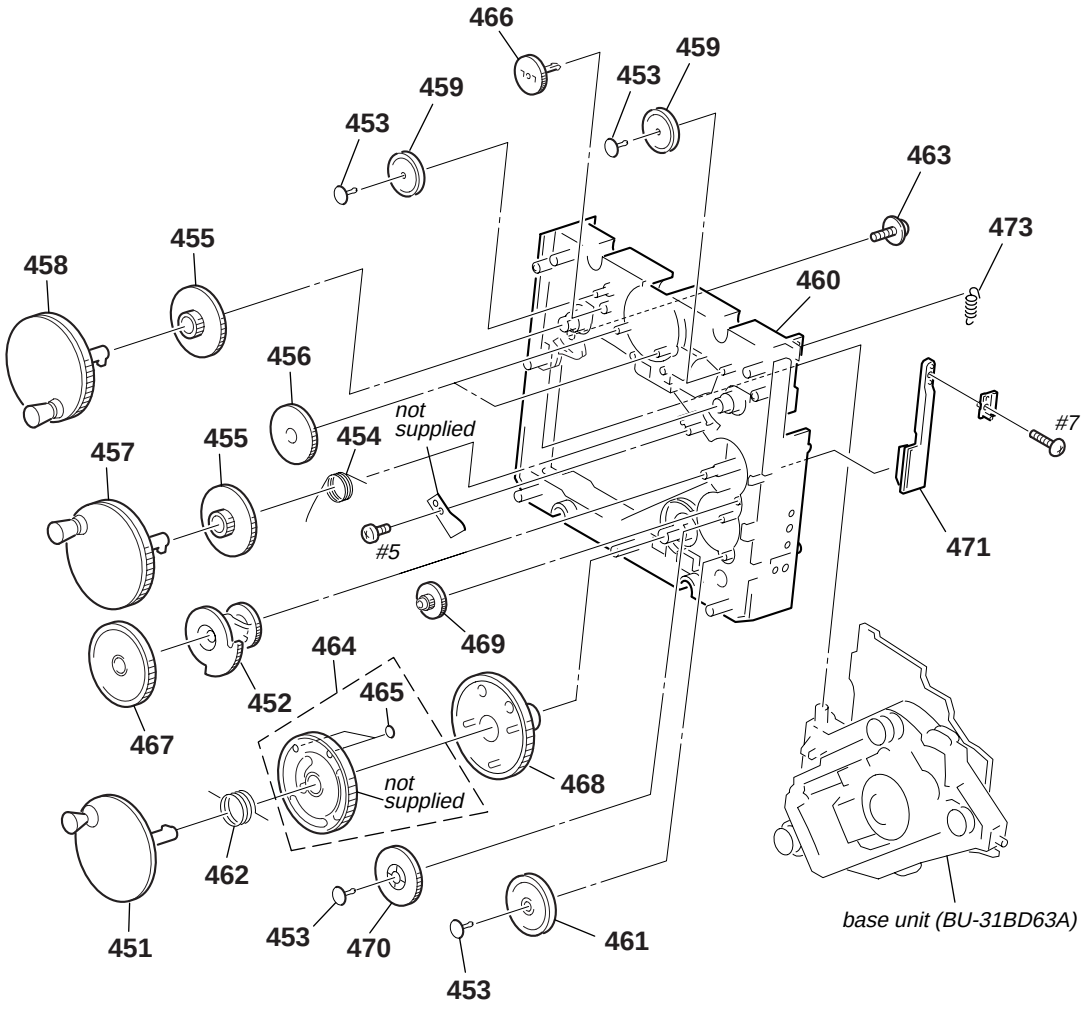
7-4. Mechanism Section(CDM71C-31BD63A)-1



Ref. No.	Part No.	Description	Remarks
401	4-240-317-01	SPRING (CD DOOR), TENSION COIL	
402	4-240-313-01	LID (CD)	
403	A-4735-610-A	MOTOR (LD) ASSY	
404	1-683-912-12	D.SENSOR BOARD	
405	1-683-914-11	ENCODER BOARD	
406	4-237-947-01	BELT (ROLLER) (L)	
407	X-4954-812-1	CAP (CHUCK) ASSY	
408	1-683-913-12	L.SENSOR BOARD	
409	4-359-697-01	CUSHION (F)	
410	4-240-533-01	ORNAMENT (MECHA PANEL)	
411	4-237-428-01	SHEET (MG)	
412	4-237-427-01	BELT (CDM71)	
413	1-683-915-12	L.MOTOR BOARD	

Ref. No.	Part No.	Description	Remarks
414	A-4728-283-A	C MOTOR BOARD, COMPLETE	
415	4-237-426-02	COVER (AT)	
416	4-237-425-02	PULLEY (AT)	
417	4-237-416-02	HOLDER (AT)	
418	4-239-618-01	SCREW (+PWH,2X6), STEP TAPPING	
419	4-239-574-01	COVER (ENCODER)	
M701	1-763-790-11	MOTOR, DC (LO)	
M702	A-4735-611-A	MOTOR (CK) ASSY (CK)	
#5	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#6	7-685-860-04	SCREW +BVTT 2.6X4 (S)	
#8	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#9	7-685-860-04	SCREW +BVTT 2.6X4 (S)	

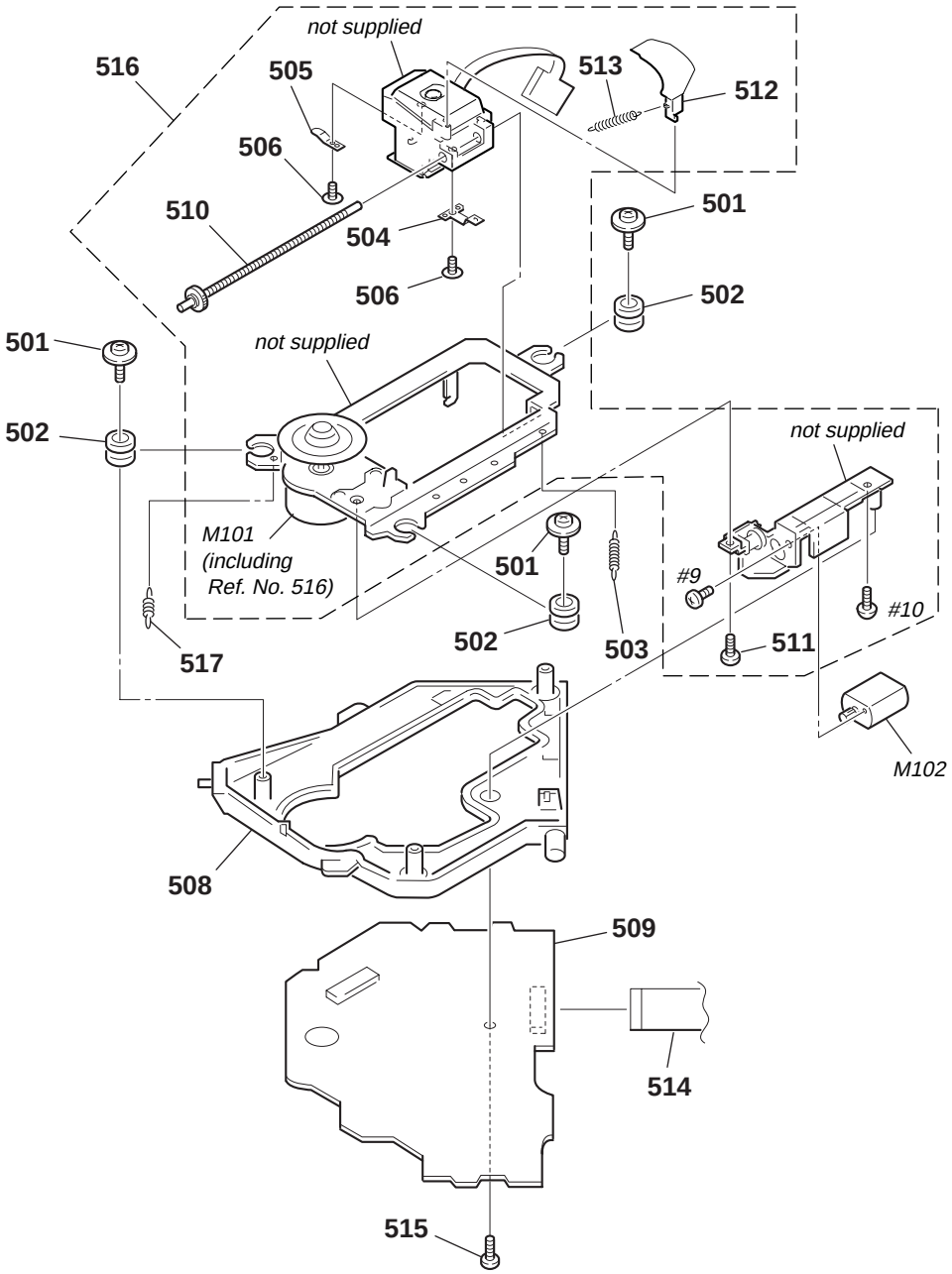
7-5. Mechanism Section(CDM71C-31BD63A)-2



Ref. No.	Part No.	Description	Remarks
451	X-4954-292-1	PULLEY (SPT) ASSY	
452	4-237-417-02	CAM (A)	
453	4-238-841-01	BUSHING (GEAR)	
454	4-237-430-01	SPRING (S), TORSION	
455	4-237-414-01	GEAR (L1)	
456	4-237-413-01	GEAR (S1)	
457	X-4954-291-1	PULLEY (RTR) ASSY	
458	X-4954-290-1	PULLEY (RTL) ASSY	
459	4-237-411-01	PULLEY (LDG)	
460	4-237-420-03	CHASSIS	
461	4-237-460-01	PULLEY (LDG2)	
462	4-237-429-02	SPRING (M), TORSION	

Ref. No.	Part No.	Description	Remarks
463	4-218-252-51	SCREW (+PTPWH M2.6), FLOATING	
464	X-4954-644-1	GEAR (RT) ASSY	
465	4-238-552-01	REFLECTOR (CDM71)	
466	4-237-459-01	GEAR (LA)	
467	4-237-415-01	GEAR (S2)	
468	4-237-424-01	GEAR (KT)	
469	4-237-423-01	GEAR (C2)	
470	4-237-421-01	GEAR (C1)	
471	4-237-952-03	LEVER (ST)	
473	4-238-835-02	SPRING (71L), TENSION	
#5	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#7	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	

7-6. Base Unit (BU-31BD63A)



Ref. No.	Part No.	Description	Remarks
501	4-218-252-51	SCREW (+PTPWH M2.6), FLOATING	
502	4-238-914-01	INSULATOR	
503	4-239-775-01	SPRING (B) (HOLDER), COIL	
504	4-238-864-01	SPRING (RACK), LEAF	
505	4-236-304-02	SPRING (SLED), LEAF	
506	3-372-761-01	SCREW (M1.7), TAPPING	
508	X-4954-533-1	HOLDER (BU-CD) ASSY	
509	A-4727-957-A	BD BOARD, COMPLETE	
510	X-4954-293-1	SCREW ASSY, LEAD	
511	3-729-076-11	SCREW (+B) (2X4)	
512	4-238-865-01	LEVER (SHUTTER)	
513	4-237-408-01	SPRING (SHUTTER), TENSION COIL	
514	1-823-860-11	WIRE (FLAT TYPE)(23CORE)	
515	4-908-618-41	SCREW (+BTP)(2X8)	
⚠516	A-4722-425-A	BU-31 ASSY	
517	4-240-872-01	SPRING (C) (HOLDER), COIL	
M102	X-4954-294-1	MOTOR ASSY, SLED (SLED)	
#9	7-685-233-19	SCREW +K 2.6X6	
#10	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- Abbreviation
  MX : Mexican model.
  AUS : Australian model.
  SP : Singapore model.
  HK : Hong Kong model.
  TW : Taiwan model.
  KR : Korean model
  CND : Canadian model.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

以阴影和⚠标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

Ref. No.	Part No.	Description			Remarks
	A-4727-957-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C103	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C104	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C107	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C111	1-126-607-11	ELECT CHIP	47uF	20%	4V
C112	1-126-607-11	ELECT CHIP	47uF	20%	4V
C113	1-126-209-11	ELECT CHIP	100uF	20.00%	4V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C117	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C118	1-115-156-11	CERAMIC CHIP	1uF		10V
C119	1-115-156-11	CERAMIC CHIP	1uF		10V
C120	1-126-607-11	ELECT CHIP	47uF	20%	4V
C151	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-117-681-11	ELECT CHIP	100uF	20.00%	16V
C164	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C165	1-124-779-00	ELECT CHIP	10uF	20%	16V
C166	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C182	1-128-994-21	ELECT CHIP	47uF	20%	10V
C201	1-126-246-11	ELECT CHIP	220uF	20%	4V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C209	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C211	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C212	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C213	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C215	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C216	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C221	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C226	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C227	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C228	1-115-156-11	CERAMIC CHIP	1uF		10V
C229	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C231	1-128-995-21	ELECT CHIP	100uF	20%	10V
C234	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C235	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C236	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
		< CONNECTOR >			
CN101	1-784-834-21	CONNECTOR,FFC(LIF(NON-ZIF))23P			
CN102	1-580-870-11	SOCKET, CONNECTOR (SMT) 16P			
		< DIODE >			
D101	8-719-083-58	DIODE UDZSTE-173.9B			
D201	8-719-071-34	DIODE RB521S-30-TE61			
		< FERRITE BEAD >			
FB101	1-500-445-21	FERRITE	0UH		
		< IC >			
IC101	8-752-408-73	IC CXD3068Q			
IC102	8-759-713-70	IC AN41020A			
IC103	8-752-089-74	IC CXA2581N-T4			
IC106	8-759-834-29	IC MC74VHC1G04DFT1			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-RT1		
Q103	8-729-920-85	TRANSISTOR	2SD1664-T100-QR		
		< RESISTOR >			
R102	1-216-835-11	METAL CHIP	15K	5%	1/16W
R103	1-216-845-11	METAL CHIP	100K	5%	1/16W
R104	1-216-835-11	METAL CHIP	15K	5%	1/16W
R105	1-216-821-11	METAL CHIP	1K	5%	1/16W
R111	1-216-846-11	METAL CHIP	120K	5%	1/16W
R113	1-218-701-11	RES-CHIP	2.4K	5%	1/10W
R114	1-218-745-11	RES-CHIP	160K	5%	1/10W
R115	1-216-839-11	METAL CHIP	33K	5%	1/16W
R116	1-216-839-11	METAL CHIP	33K	5%	1/16W
R118	1-216-864-11	METAL CHIP	0	5%	1/16W
R120	1-216-846-11	METAL CHIP	120K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-797-11	METAL CHIP	10	5%	1/16W
R124	1-216-797-11	METAL CHIP	10	5%	1/16W
R125	1-216-839-11	METAL CHIP	33K	5%	1/16W
R126	1-216-839-11	METAL CHIP	33K	5%	1/16W

BD **C MOTOR** **D.SENDOR** **ENCODER** **LED** **LID**

Ref. No.	Part No.	Description			Remarks
R151	1-216-845-11	METAL CHIP	100K	5%	1/16W
R152	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R163	1-216-864-11	METAL CHIP	0	5%	1/16W
R164	1-216-864-11	METAL CHIP	0	5%	1/16W
R167	1-216-864-11	METAL CHIP	0	5%	1/16W
R168	1-216-864-11	METAL CHIP	0	5%	1/16W
R176	1-216-864-11	METAL CHIP	0	5%	1/16W
R179	1-216-864-11	METAL CHIP	0	5%	1/16W
R201	1-216-839-11	METAL CHIP	33K	5%	1/16W
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W
R203	1-216-845-11	METAL CHIP	100K	5%	1/16W
R204	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R205	1-216-821-11	METAL CHIP	1K	5%	1/16W
R206	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R207	1-216-857-11	METAL CHIP	1M	5%	1/16W
R212	1-216-813-11	METAL CHIP	220	5%	1/16W
R213	1-216-864-11	METAL CHIP	0	5%	1/16W
R214	1-216-864-11	METAL CHIP	0	5%	1/16W
R215	1-216-864-11	METAL CHIP	0	5%	1/16W
R218	1-216-821-11	METAL CHIP	1K	5%	1/16W
R219	1-216-821-11	METAL CHIP	1K	5%	1/16W
R220	1-216-864-11	METAL CHIP	0	5%	1/16W
R221	1-216-813-11	METAL CHIP	220	5%	1/16W
R222	1-216-813-11	METAL CHIP	220	5%	1/16W
R224	1-216-813-11	METAL CHIP	220	5%	1/16W
R225	1-216-813-11	METAL CHIP	220	5%	1/16W
R226	1-216-809-11	METAL CHIP	100	5%	1/16W
R227	1-216-839-11	METAL CHIP	33K	5%	1/16W
R228	1-216-849-11	METAL CHIP	220K	5%	1/16W
R229	1-216-819-11	METAL CHIP	680	5%	1/16W
R230	1-216-864-11	METAL CHIP	0	5%	1/16W
R237	1-216-809-11	METAL CHIP	100	5%	1/16W
R239	1-216-809-11	METAL CHIP	100	5%	1/16W
R240	1-216-864-11	METAL CHIP	0	5%	1/16W
R250	1-216-841-11	METAL CHIP	47K	5%	1/16W
R299	1-216-864-11	METAL CHIP	0	5%	1/16W
		< CHIP NETWORK >			
RN201	1-233-576-11	RES, CHIP NETWORK 100			
RN202	1-233-576-11	RES, CHIP NETWORK 100			
		< VARIABLE RESISTOR >			
RV101	1-223-997-21	RES, CARBON ADJ VAR 47K			
**********					
	A-4728-283-A	C MOTOR BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-126-791-11	ELECT	10uF	20.00%	16V
C705	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C751	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C752	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN751	1-785-337-11	PIN, CONNECTOR(LIGHT ANGLE)11P			
CN752	1-785-332-11	PIN, CONNECTOR (LIGHT ANGLE)6P			
CN753	1-506-468-11	PIN, CONNECTOR 3P			

Ref. No.	Part No.	Description			Remarks
* CN754	1-568-954-11	PIN, CONNECTOR 5P			
* CN755	1-568-954-11	PIN, CONNECTOR 5P			
		< DIODE >			
D701	8-719-083-57	DIODE UDZSTE-173.6B			
		< IC >			
IC701	8-759-598-69	IC BA6956AN			
		< RESISTOR >			
R701	1-216-815-11	METAL CHIP	330	5%	1/16W
R702	1-216-805-11	METAL CHIP	47	5%	1/16W
R751	1-216-833-11	METAL CHIP	10K	5%	1/16W
R752	1-216-833-11	METAL CHIP	10K	5%	1/16W
R753	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R754	1-216-833-11	METAL CHIP	10K	5%	1/16W
**********					
	1-683-912-12	D.SENSOR BOARD			
		**********			
		< IC >			
IC731	8-749-017-45	SENSOR, PHONT RPR-220C1N			
		< RESISTOR >			
R731	1-216-815-11	METAL CHIP	330	5%	1/16W
R732	1-216-815-11	METAL CHIP	330	5%	1/16W
		< SWITCH >			
S731	1-786-289-21	SWITCH, DETECTION (L MTR/C MTR)			
**********					
	1-683-914-11	ENCODER BOARD			
		**********			
		< ENCODER >			
S741	1-477-161-11	ENCODER			
**********					
	1-684-936-11	LED BOARD			
		**********			
		< DIODE >			
D681	6-500-236-01	DIODE SELU5920C-TP15 (LCD BACK LIGHT)			
D682	6-500-236-01	DIODE SELU5920C-TP15 (LCD BACK LIGHT)			
D683	6-500-236-01	DIODE SELU5920C-TP15 (LCD BACK LIGHT)			
D684	6-500-236-01	DIODE SELU5920C-TP15 (LCD BACK LIGHT)			
		< RESISTOR >			
R681	1-216-864-11	METAL CHIP	0	5%	1/16W
**********					
	1-684-937-11	LID BOARD			
		**********			
		< RESISTOR >			
R601	1-216-821-11	METAL CHIP	1K	5%	1/16W
R602	1-216-825-11	METAL CHIP	2.2K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R603	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R611	1-216-821-11	METAL CHIP	1K	5%	1/16W
R612	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R613	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R614	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
		< SWITCH >			
S601	1-771-410-21	SWITCH, TACTILE (DISPLAY)			
S602	1-771-410-21	SWITCH, TACTILE (FUNCTION)			
S603	1-771-410-21	SWITCH, TACTILE (TUNER BAND)			
S611	1-771-410-21	SWITCH, TACTILE (PLAY/PAUSE)			
S612	1-771-410-21	SWITCH, TACTILE (STOP)			
S613	1-771-410-21	SWITCH, TACTILE (TUNING-)			
S614	1-771-410-21	SWITCH, TACTILE (TUNING+)			
S615	1-771-410-21	SWITCH, TACTILE (VOLUME-)			
S616	1-771-410-21	SWITCH, TACTILE (VOLUME+)			
**********					
	1-683-915-12	L.MOTOR BOARD			
		**********			
		< CAPACITOR >			
C711	1-126-791-11	ELECT	10uF	20.00%	16V
C715	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN711	1-785-330-11	PIN, CONNECTOR (LIGHT ANGLE)4P			
		< DIODE >			
D711	8-719-083-57	DIODE UDZSTE-173.6B			
		< IC >			
IC711	8-759-598-69	IC BA6956AN			
		< RESISTOR >			
R711	1-216-815-11	METAL CHIP	330	5%	1/16W
R712	1-216-805-11	METAL CHIP	47	5%	1/16W
**********					
	1-683-913-12	L.SENSOR BOARD			
		**********			
		< IC >			
IC721	8-749-017-45	SENSOR, PHONT RPR-220C1N			
		< RESISTOR >			
R721	1-216-815-11	METAL CHIP	330	5%	1/16W
R722	1-216-815-11	METAL CHIP	330	5%	1/16W
**********					

Ref. No.	Part No.	Description			Remarks
	A-4729-141-A	MAIN BOARD, COMPLETE (MX)			
	A-4676-648-A	MAIN BOARD, COMPLETE (AUS,SP,HK,TW,KR)			
	A-4676-642-A	MAIN BOARD, COMPLETE (AEP,UK)			
	A-4676-614-A	MAIN BOARD, COMPLETE (US,CND)			
		**********			
*	1-690-880-41	LEAD (WITH CONNECTOR)			
	4-240-310-01	HOLDER, LCD			
	4-240-311-01	ILLUMINATOR			
		< CAPACITOR >			
C100	1-162-290-31	CERAMIC	470PF	10.00%	50V
C101	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C102	1-126-961-11	ELECT	2.2uF	20.00%	50V
C111	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C112	1-126-960-11	ELECT	1uF	20.00%	50V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C121	1-126-964-11	ELECT	10uF	20.00%	50V
C122	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C123	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C124	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C125	1-119-824-11	ELECT	10uF	20%	50V
C126	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C127	1-119-821-11	ELECT	2.2uF	20%	50V
C128	1-130-495-00	MYLAR	0.1uF	5%	50V
C129	1-130-495-00	MYLAR	0.1uF	5%	50V
C130	1-119-824-11	ELECT	10uF	20%	50V
C131	1-119-820-11	ELECT	1uF	20%	50V
C132	1-126-961-11	ELECT	2.2uF	20.00%	50V
C151	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C152	1-126-961-11	ELECT	2.2uF	20.00%	50V
C161	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C162	1-126-960-11	ELECT	1uF	20.00%	50V
C171	1-126-964-11	ELECT	10uF	20.00%	50V
C172	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C173	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C174	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C175	1-119-824-11	ELECT	10uF	20%	50V
C176	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C177	1-119-821-11	ELECT	2.2uF	20%	50V
C178	1-130-495-00	MYLAR	0.1uF	5%	50V
C179	1-130-495-00	MYLAR	0.1uF	5%	50V
C180	1-119-824-11	ELECT	10uF	20%	50V
C181	1-119-820-11	ELECT	1uF	20%	50V
C191	1-127-720-91	ELECT	470uF	20%	16V
C192	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C193	1-127-720-91	ELECT	470uF	20%	16V
C194	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C195	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C196	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C301	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C302	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C303	1-119-821-11	ELECT	2.2uF	20%	50V
C312	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C313	1-128-832-11	ELECT	220uF	20%	10V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C316	1-128-832-11	ELECT	220uF	20%	10V
C317	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remarks
C351	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C352	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C353	1-119-821-11	ELECT	2.2uF	20%	50V
C373	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C381	1-125-837-91	CERAMIC CHIP	1uF	10.00%	6.3V
C382	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C383	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C391	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C398	1-164-159-11	CERAMIC	0.1uF		50V
C399	1-164-159-11	CERAMIC	0.1uF		50V
C401	1-126-933-11	ELECT	100uF	20.00%	16V
C402	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C403	1-126-964-11	ELECT	10uF	20.00%	50V (AEP,UK)
C404	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V (AEP,UK)
C501	1-126-960-11	ELECT	1uF	20.00%	50V
C503	1-126-948-11	ELECT	100uF	20.00%	35V
C504	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C505	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C507	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C551	1-126-960-11	ELECT	1uF	20.00%	50V
C553	1-126-948-11	ELECT	100uF	20.00%	35V
C554	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C555	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C591	1-126-933-11	ELECT	100uF	20.00%	16V
C592	1-126-934-11	ELECT	220uF	20.00%	10V
C593	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C621	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C632	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C691	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C701	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C702	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C703	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C704	1-164-346-11	CERAMIC CHIP	1uF		16V
C705	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C706	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C707	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C708	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C709	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C710	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C711	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C712	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C713	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C714	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C715	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C716	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C721	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C722	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C723	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C781	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C784	1-128-835-91	ELECT	1000uF	20%	10V
C789	1-135-671-51	ELECT	2200uF	20%	10V
C791	1-126-947-11	ELECT	47uF	20.00%	16V
C792	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C793	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C795	1-126-917-11	ELECT	3300uF	20.00%	6.3V
C796	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remarks
C798	1-164-159-21	CERAMIC	0.1uF		50V
C799	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
		< CONNECTOR >			
CN301	1-779-291-11	CONNECTOR,FFC(LIF(NON-ZIF))23P			
CN302	1-785-323-11	PIN, CONNECTOR (STRAIGHT) 11P			
CN303	1-785-318-11	PIN, CONNECTOR (STRAIGHT) 6P			
CN401	1-568-830-11	CONNECTOR, FFC 11P (EXCEPT AEP,UK)			
CN401	1-784-776-11	CONNECTOR, FFC 15P (AEP,UK)			
CN601	1-785-315-21	PIN, CONNECTOR (STRAIGHT) 3P			
CN621	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE)3P			
CN671	1-785-314-11	PIN, CONNECTOR (STRAIGHT) 2P			
CN703	1-784-776-11	CONNECTOR, FFC 15P			
		< DIODE >			
D101	8-719-988-61	DIODE 1SS355TE-17			
D102	8-719-988-61	DIODE 1SS355TE-17			
D191	8-719-988-61	DIODE 1SS355TE-17			
D401	8-719-069-55	DIODE UDZSTE-175.6B (AEP,UK)			
D501	8-719-988-61	DIODE 1SS355TE-17			
D621	8-719-071-44	DIODE SELS5223C-TP15			
D701	8-719-988-61	DIODE 1SS355TE-17			
D702	8-719-988-61	DIODE 1SS355TE-17			
D703	8-719-988-61	DIODE 1SS355TE-17			
D791	8-719-069-29	DIODE RB520S-30TE61			
D792	8-719-069-29	DIODE RB520S-30TE61			
D793	8-719-988-61	DIODE 1SS355TE-17			
D794	8-719-988-61	DIODE 1SS355TE-17			
D795	8-719-069-29	DIODE RB520S-30TE61			
		< FERRITE BEAD >			
FB381	1-500-445-21	FERRITE	0UH		
FB383	1-500-445-21	FERRITE	0UH		
FB384	1-500-445-21	FERRITE	0UH		
FB512	1-500-445-21	FERRITE	0UH		
FB701	1-500-445-21	FERRITE	0UH		
		< IC >			
IC121	6-702-422-11	IC M61519FPD61G			
IC301	8-759-825-13	IC PCM1748E/2K			
IC302	8-759-701-40	IC NJM2100M(TE2)			
IC371	6-600-012-01	IC TOTX141L (CD DIGITAL OUT)			
IC381	8-759-242-70	IC TC7WU04F(TE12R)			
IC501	8-759-656-83	IC NJM4580MD-(TE2)			
IC631	6-600-100-01	IC NJL65V400			
IC701	6-801-749-01	IC uPD703030BYGF-M02-3BA			
IC791	8-759-824-69	IC PST9245NL			
		< JACK >			
J101	1-573-798-11	JACK, MINIATURE (DIA. 3.5)(PC/TAPE/MD IN)			
J111	1-573-798-11	JACK, MINIATURE (DIA. 3.5)(PC/TAPE/MD OUT)			
J501	1-566-891-11	JACK (PHONES)			
		< COIL >			
L401	1-410-482-31	INDUCTOR	100uH		
L691	1-414-754-11	INDUCTOR	10uH		

Ref. No.	Part No.	Description			Remarks
		< LIQUID CRYSTAL DISPLAY >			
LCD601	1-804-713-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q111	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q121	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6		
Q122	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q123	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q124	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q161	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q171	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6		
Q172	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q391	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6		
Q401	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6 (AEP,UK)		
Q402	8-729-900-53	TRANSISTOR	DTC114EKA-T146 (AEP,UK)		
Q501	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q551	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q591	8-729-046-97	TRANSISTOR	2SD1938(F)-T(TX).SO		
Q672	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q674	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q691	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q692	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q701	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q781	6-550-185-01	TRANSISTOR	RT1P137P-TP-1		
Q782	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q791	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6		
Q792	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q793	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R101	1-216-821-11	METAL CHIP	1K	5%	1/16W
R102	1-216-845-11	METAL CHIP	100K	5%	1/16W
R111	1-216-845-11	METAL CHIP	100K	5%	1/16W
R112	1-216-821-11	METAL CHIP	1K	5%	1/16W
R113	1-216-821-11	METAL CHIP	1K	5%	1/16W
R121	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R122	1-216-833-11	METAL CHIP	10K	5%	1/16W
R123	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R124	1-216-839-11	METAL CHIP	33K	5%	1/16W
R125	1-216-857-11	METAL CHIP	1M	5%	1/16W
R126	1-216-841-11	METAL CHIP	47K	5%	1/16W
R127	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R128	1-216-845-11	METAL CHIP	100K	5%	1/16W
R129	1-216-833-11	METAL CHIP	10K	5%	1/16W
R130	1-216-821-11	METAL CHIP	1K	5%	1/16W
R131	1-216-864-11	METAL CHIP	0	5%	1/16W
R132	1-216-833-11	METAL CHIP	10K	5%	1/16W
R151	1-216-821-11	METAL CHIP	1K	5%	1/16W
R152	1-216-845-11	METAL CHIP	100K	5%	1/16W
R161	1-216-845-11	METAL CHIP	100K	5%	1/16W
R162	1-216-821-11	METAL CHIP	1K	5%	1/16W
R163	1-216-821-11	METAL CHIP	1K	5%	1/16W
R171	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R172	1-216-833-11	METAL CHIP	10K	5%	1/16W
R173	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R174	1-216-839-11	METAL CHIP	33K	5%	1/16W
R175	1-216-857-11	METAL CHIP	1M	5%	1/16W
R176	1-216-841-11	METAL CHIP	47K	5%	1/16W
R177	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R178	1-216-845-11	METAL CHIP	100K	5%	1/16W
R179	1-216-833-11	METAL CHIP	10K	5%	1/16W
R191	1-216-821-11	METAL CHIP	1K	5%	1/16W
R192	1-216-821-11	METAL CHIP	1K	5%	1/16W
R193	1-216-833-11	METAL CHIP	10K	5%	1/16W
R301	1-216-833-11	METAL CHIP	10K	5%	1/16W
R302	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R303	1-216-833-11	METAL CHIP	10K	5%	1/16W
R311	1-216-809-11	METAL CHIP	100	5%	1/16W
R312	1-216-809-11	METAL CHIP	100	5%	1/16W
R313	1-216-809-11	METAL CHIP	100	5%	1/16W
R314	1-216-864-11	METAL CHIP	0	5%	1/16W
R315	1-216-864-11	METAL CHIP	0	5%	1/16W
R316	1-216-864-11	METAL CHIP	0	5%	1/16W
R351	1-216-833-11	METAL CHIP	10K	5%	1/16W
R352	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/16W
R381	1-216-864-11	METAL CHIP	0	5%	1/16W
R382	1-216-857-11	METAL CHIP	1M	5%	1/16W
R383	1-216-817-11	METAL CHIP	470	5%	1/16W
R384	1-216-817-11	METAL CHIP	470	5%	1/16W
R391	1-216-821-11	METAL CHIP	1K	5%	1/16W
R392	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R401	1-216-821-11	METAL CHIP	1K	5%	1/16W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R403	1-216-833-11	METAL CHIP	10K	5%	1/16W (AEP,UK)
R451	1-216-821-11	METAL CHIP	1K	5%	1/16W
R452	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R501	1-216-833-11	METAL CHIP	10K	5%	1/16W
R502	1-216-845-11	METAL CHIP	100K	5%	1/16W
R503	1-216-841-11	METAL CHIP	47K	5%	1/16W
R504	1-216-807-11	METAL CHIP	68	5%	1/16W
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W
R506	1-216-833-11	METAL CHIP	10K	5%	1/16W
R507	1-216-821-11	METAL CHIP	1K	5%	1/16W
R511	1-216-837-11	METAL CHIP	22K	5%	1/16W
R512	1-216-857-11	METAL CHIP	1M	5%	1/16W
R551	1-216-833-11	METAL CHIP	10K	5%	1/16W
R552	1-216-845-11	METAL CHIP	100K	5%	1/16W
R553	1-216-841-11	METAL CHIP	47K	5%	1/16W
R554	1-216-807-11	METAL CHIP	68	5%	1/16W
R555	1-216-821-11	METAL CHIP	1K	5%	1/16W
R556	1-216-833-11	METAL CHIP	10K	5%	1/16W
R557	1-216-821-11	METAL CHIP	1K	5%	1/16W
R590	1-216-809-11	METAL CHIP	100	5%	1/16W
R591	1-216-821-11	METAL CHIP	1K	5%	1/16W
R592	1-216-821-11	METAL CHIP	1K	5%	1/16W
R593	1-216-833-11	METAL CHIP	10K	5%	1/16W
R673	1-216-811-11	METAL CHIP	150	5%	1/16W
R676	1-216-815-11	METAL CHIP	330	5%	1/16W
R691	1-216-864-11	METAL CHIP	0	5%	1/16W
R693	1-216-821-11	METAL CHIP	1K	5%	1/16W
R694	1-216-809-11	METAL CHIP	100	5%	1/16W
R695	1-216-809-11	METAL CHIP	100	5%	1/16W
R696	1-216-809-11	METAL CHIP	100	5%	1/16W

MAIN **OC** **OS** **POWER**

Ref. No.	Part No.	Description			Remarks
R697	1-216-809-11	METAL CHIP	100	5%	1/16W
R701	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R702	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R703	1-216-833-11	METAL CHIP	10K	5%	1/16W
R706	1-216-845-11	METAL CHIP	100K	5%	1/16W
R713	1-216-849-11	METAL CHIP	220K	5%	1/16W
R714	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R715	1-216-864-11	METAL CHIP	0	5%	1/16W
R719	1-216-851-11	METAL CHIP	330K	5%	1/16W
R720	1-216-837-11	METAL CHIP	22K	5%	1/16W
R721	1-216-809-11	METAL CHIP	100	5%	1/16W
R722	1-216-809-11	METAL CHIP	100	5%	1/16W
R723	1-216-821-11	METAL CHIP	1K	5%	1/16W
R724	1-216-809-11	METAL CHIP	100	5%	1/16W
R725	1-216-809-11	METAL CHIP	100	5%	1/16W
R726	1-216-833-11	METAL CHIP	10K	5%	1/16W
R727	1-216-809-11	METAL CHIP	100	5%	1/16W
R728	1-216-833-11	METAL CHIP	10K	5%	1/16W
R729	1-216-809-11	METAL CHIP	100	5%	1/16W
R730	1-216-809-11	METAL CHIP	100	5%	1/16W (AEP,UK)
R731	1-216-845-11	METAL CHIP	100K	5%	1/16W
R732	1-216-833-11	METAL CHIP	10K	5%	1/16W (EXCEPT US,CND)
R733	1-216-833-11	METAL CHIP	10K	5%	1/16W (US,CND)
R735	1-216-833-11	METAL CHIP	10K	5%	1/16W
R736	1-216-833-11	METAL CHIP	10K	5%	1/16W (AEP,UK,AUS,SP,HK,TW,KR)
R737	1-216-833-11	METAL CHIP	10K	5%	1/16W (US,CND,MX)
R738	1-216-833-11	METAL CHIP	10K	5%	1/16W (US,CND,AEP,UK,MX)
R739	1-216-833-11	METAL CHIP	10K	5%	1/16W (AUS,SP,HK,TW,KR)
R740	1-216-809-11	METAL CHIP	100	5%	1/16W
R741	1-216-821-11	METAL CHIP	1K	5%	1/16W
R742	1-216-833-11	METAL CHIP	10K	5%	1/16W
R743	1-216-821-11	METAL CHIP	1K	5%	1/16W
R744	1-216-833-11	METAL CHIP	10K	5%	1/16W
R745	1-216-821-11	METAL CHIP	1K	5%	1/16W
R746	1-216-833-11	METAL CHIP	10K	5%	1/16W
R747	1-216-857-11	METAL CHIP	1M	5%	1/16W
R748	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R749	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R750	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R751	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R752	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R753	1-216-815-11	METAL CHIP	330	5%	1/16W
R754	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R755	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R756	1-216-841-11	METAL CHIP	47K	5%	1/16W
R757	1-216-857-11	METAL CHIP	1M	5%	1/16W
R758	1-216-841-11	METAL CHIP	47K	5%	1/16W
R759	1-216-821-11	METAL CHIP	1K	5%	1/16W
R760	1-216-821-11	METAL CHIP	1K	5%	1/16W (AEP,UK)
R761	1-216-845-11	METAL CHIP	100K	5%	1/16W
R763	1-216-833-11	METAL CHIP	10K	5%	1/16W
R765	1-216-833-11	METAL CHIP	10K	5%	1/16W
R767	1-216-833-11	METAL CHIP	10K	5%	1/16W
R768	1-216-833-11	METAL CHIP	10K	5%	1/16W
R769	1-216-833-11	METAL CHIP	10K	5%	1/16W
R770	1-216-833-11	METAL CHIP	10K	5%	1/16W
R771	1-216-809-11	METAL CHIP	100	5%	1/16W
R772	1-216-809-11	METAL CHIP	100	5%	1/16W
R773	1-216-833-11	METAL CHIP	10K	5%	1/16W
R781	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R791	1-216-821-11	METAL CHIP	1K	5%	1/16W
R792	1-216-833-11	METAL CHIP	10K	5%	1/16W
R793	1-216-841-11	METAL CHIP	47K	5%	1/16W
R794	1-216-841-11	METAL CHIP	47K	5%	1/16W
R795	1-216-837-11	METAL CHIP	22K	5%	1/16W
R796	1-216-809-11	METAL CHIP	100	5%	1/16W
R797	1-216-839-11	METAL CHIP	33K	5%	1/16W
R798	1-216-837-11	METAL CHIP	22K	5%	1/16W
		< VIBRATOR >			
X381	1-579-280-11	VIBRATOR, CRYSTAL 16.9344MHz			
X701	1-567-098-41	VIBRATOR, CRYSTAL 32.768KHz			
X702	1-760-014-31	VIBRATOR, CERAMIC 20MHz			
**********					
	1-684-939-11	OC BOARD			
		*********			
		< RESISTOR >			
R622	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< SWITCH >			
S622	1-771-410-21	SWITCH, TACTILE (OPEN)			
**********					
	1-684-938-11	OS BOARD			
		*********			
		< DIODE >			
D621	8-719-071-44	DIODE SELS5223C-TP15 (STANDBY)			
		< RESISTOR >			
R621	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
		< SWITCH >			
S621	1-771-410-21	SWITCH, TACTILE (STANDBY)			
**********					
	A-4676-650-A	POWER BOARD, COMPLETE (AUS,SP,MX,HK,TW,KR)			
	A-4676-644-A	POWER BOARD, COMPLETE (AEP,UK)			
	A-4676-617-A	POWER BOARD, COMPLETE (US,CND)			
		**********			
	1-533-217-31	HOLDER, FUSE			
		< CAPACITOR >			
C1	1-107-956-11	ELECT	220uF	20.00% 200V (US,CND)	
C1	1-131-678-11	ELECT	82uF	20% 400V (AUS,SP,MX,HK,TW,KR)	

Ref. No.	Part No.	Description			Remarks
C1	1-131-714-11	ELECT	100uF	20%	400V (AEP,UK)
C2	1-107-908-11	ELECT	33uF	20.00%	50V
C4	1-104-572-11	CERAMIC	0.0022uF	10.00%	2KV (US,CND)
C4	1-104-569-11	CERAMIC	680PF	10.00%	2KV (EXCEPT US,CND)
⚠C6	1-131-983-11	FILM	0.1uF	10	275V
⚠C7	1-131-983-11	FILM	0.1uF	10	275V
⚠C8	1-131-983-11	FILM	0.1uF	10	275V
C9	1-113-907-51	CERAMIC	0.0022uF	99%	250V
C10	1-136-203-11	FILM	10000PF	5.00%	630V
⚠C11	1-113-920-11	CERAMIC	0.0022uF	20.00%	250V
C12	1-113-920-11	CERAMIC	0.0022uF	20.00%	250V
⚠C13	1-131-714-11	ELECT	100uF	20%	400V (AEP,UK)
⚠C13	1-131-678-11	ELECT	82uF	20%	400V (AUS,SP,MX,HK,TW,KR)
⚠C14	1-113-920-11	CERAMIC	0.0022uF	20.00%	250V
C15	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C21	1-107-905-11	ELECT	4.7uF	20.00%	50V
C22	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C24	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C25	1-164-222-91	CERAMIC CHIP	0.22uF		25V
C51	1-107-908-11	ELECT	33uF	20.00%	50V
C52	1-107-903-11	ELECT	2.2uF	20.00%	50V
C53	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C54	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C801	1-107-901-11	ELECT	0.47uF	20.00%	50V
C802	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C803	1-107-889-11	ELECT	220uF	20.00%	10V
C804	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C805	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C806	1-107-902-11	ELECT	1uF	20.00%	50V
C807	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C808	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C809	1-126-935-11	ELECT	470uF	20.00%	16V
C810	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C811	1-126-935-11	ELECT	470uF	20.00%	16V
C812	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C813	1-126-935-11	ELECT	470uF	20.00%	16V
C814	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C816	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C817	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C818	1-164-346-11	CERAMIC CHIP	1uF		16V
C821	1-136-177-00	FILM	1uF	5.00%	50V
C822	1-136-177-00	FILM	1uF	5.00%	50V
C823	1-137-194-91	FILM	0.47uF	5.00%	50V
C831	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C832	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C833	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C841	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C851	1-107-901-11	ELECT	0.47uF	20.00%	50V
C852	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C871	1-136-177-00	FILM	1uF	5.00%	50V
C872	1-136-177-00	FILM	1uF	5.00%	50V
C873	1-137-194-91	FILM	0.47uF	5.00%	50V
C881	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C882	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C883	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C891	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C899	1-135-697-11	ELECT	6800uF		16V
C901	1-104-569-11	CERAMIC	680PF	10.00%	2KV
C902	1-128-951-21	ELECT	2200uF	20%	16V
C903	1-128-951-21	ELECT	2200uF	20%	16V
C911	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C912	1-107-877-11	ELECT	1000uF	20.00%	10V
C921	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C922	1-107-877-11	ELECT	1000uF	20.00%	10V
C931	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C932	1-107-884-11	ELECT	1000uF	20.00%	16V
C951	1-164-346-11	CERAMIC CHIP	1uF		16V
C953	1-128-951-21	ELECT	2200uF	20%	16V
C954	1-104-665-11	ELECT	100uF	20.00%	10V
C955	1-164-505-11	CERAMIC CHIP	2.2uF		16V
		< CONNECTOR >			
* CN1	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P			
CN803	1-770-722-11	CONNECTOR, BOARD TO BOARD 6P			
CN901	1-784-737-11	CONNECTOR, FFC 15P			
		< DIODE >			
D1	6-500-241-01	DIODE SARS03			
D2	8-719-072-11	DIODE AL01Z-WS			
D3	8-719-072-11	DIODE AL01Z-WS			
D4	8-719-977-28	DIODE UDZSTE-1710B (AUS,SP,MX,HK,TW,KR)			
D5	8-719-072-11	DIODE AL01Z-WS (AUS,SP,MX,HK,TW,KR)			
D6	8-719-072-11	DIODE AL01Z-WS			
D10	8-719-510-53	DIODE RBV-406H-01			
D21	8-719-109-89	DIODE MTZJ-T-77-5.6B			
D22	8-719-988-61	DIODE 1SS355TE-17			
D53	8-719-084-21	DIODE 10E6N-TA1B2			
D54	8-719-072-11	DIODE AL01Z-WS			
D55	8-719-083-67	DIODE UDZSTE-1720B			
D56	8-719-988-61	DIODE 1SS355TE-17			
D57	8-719-988-61	DIODE 1SS355TE-17			
D58	8-719-988-61	DIODE 1SS355TE-17			
D801	8-719-988-61	DIODE 1SS355TE-17			
D802	8-719-988-61	DIODE 1SS355TE-17			
D803	8-719-988-61	DIODE 1SS355TE-17			
D805	8-719-988-61	DIODE 1SS355TE-17			
D821	8-719-210-21	DIODE 11EQS04-NTA1B			
D822	8-719-210-21	DIODE 11EQS04-NTA1B			
D823	8-719-210-21	DIODE 11EQS04-NTA1B			
D824	8-719-210-21	DIODE 11EQS04-NTA1B			
D871	8-719-210-21	DIODE 11EQS04-NTA1B			
D872	8-719-210-21	DIODE 11EQS04-NTA1B			
D873	8-719-210-21	DIODE 11EQS04-NTA1B			
D874	8-719-210-21	DIODE 11EQS04-NTA1B			
D901	8-719-058-38	DIODE FMN-G12S			
D902	8-719-072-11	DIODE AL01Z-WS			
D951	8-719-210-21	DIODE 11EQS04-NTA1B			
D952	8-719-988-61	DIODE 1SS355TE-17			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	以阴影和 ⚠ 标志来识别的零部件，在安全方面具有关键性，因此只能以规定号码的零部件来更换。

POWER

Ref. No.	Part No.	Description	Remarks
		< EARTH >	
* EPT1	1-537-738-21	TERMINAL, EARTH	
* EPT2	1-537-738-21	TERMINAL, EARTH (US,CND)	
		< FUSE >	
⚠F1	1-533-451-11	FUSE, GLASS TUBE (DIA. 5) 3.15A/125V	(US,CND)
⚠F1	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) 3.15A/250V (TIME-LAG)	(EXCEPT US,CND)
		<INDUCTOR>	
FB801	1-412-473-21	INDUCTOR 0uH	
		< IC >	
IC1	6-600-103-01	IC STR-F6254-LF1352 (US,CND)	
IC1	6-600-105-01	IC STR-F6267S-LF1352 (AUS,SP,MX,HK,TW,KR)	
IC1	6-600-104-01	IC STR-F6264-LF1352 (AEP,UK)	
IC51	6-600-102-01	IC STR-A6459	
IC101	8-759-638-11	IC TA2020-020	
IC102	8-759-909-71	IC BA4558F-E2	
IC911	8-759-231-53	IC M5F7805L	
IC921	8-759-071-48	IC TA7807S	
IC931	8-759-231-57	IC TA7810S	
IC941	6-700-388-01	IC SE-B2	
IC951	6-702-310-01	IC NJU7201L55-T3	
		< COIL >	
⚠L1	1-456-053-11	INDUCTOR 7.7MH	
⚠L2	1-456-053-11	INDUCTOR 7.7MH	
L821	1-419-281-11	INDUCTOR 10uH	
L822	1-419-281-11	INDUCTOR 10uH	
L871	1-419-281-11	INDUCTOR 10uH	
L872	1-419-281-11	INDUCTOR 10uH	
L901	1-419-281-11	INDUCTOR 10uH	
		< IC >	
⚠PC1	8-749-013-68	IC PS2561-1-D	
⚠PC51	8-749-013-68	IC PS2561-1-D	
		< TRANSISTOR >	
Q1	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q51	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q52	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q53	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6	
Q801	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q841	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6	
Q842	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6	
Q843	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q844	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q891	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6	
Q892	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6	
Q951	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q952	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q953	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6	

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
⚠R1	1-219-237-11	SOLID	3.3M	20%	1/2W (US,CND)
R2	1-249-417-11	CARBON	1K	5%	1/4W F
R3	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R5	1-217-153-00	METAL	0.47	10%	2W
R7	1-217-152-00	METAL	0.33	10%	2W
R8	1-249-393-11	CARBON	10	5%	1/4W F
R9	1-215-904-11	METAL OXIDE	100K	5%	2W
R21	1-249-431-11	CARBON	15K	5%	1/4W (AUS,SP,MX,HK,TW,KR)
R22	1-216-813-11	METAL CHIP	220	5%	1/16W
R51	1-247-891-00	CARBON	330K	5%	1/4W (EXCEPT AEP,UK)
R51	1-247-895-91	CARBON	470K	5%	1/4W (AEP,UK)
R53	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R54	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R55	1-249-389-11	CARBON	4.7	5%	1/4W F (EXCEPT AEP,UK)
R55	1-249-392-11	CARBON	8.2	5%	1/4W F (AEP,UK)
R56	1-216-833-11	METAL CHIP	10K	5%	1/16W
R57	1-216-841-11	METAL CHIP	47K	5%	1/16W
R58	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R59	1-216-811-11	METAL CHIP	150	5%	1/16W
R801	1-216-833-11	METAL CHIP	10K	5%	1/16W
R802	1-216-837-11	METAL CHIP	22K	5%	1/16W
R803	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R804	1-216-857-11	METAL CHIP	1M	5%	1/16W
R805	1-216-837-11	METAL CHIP	22K	5%	1/16W
R810	1-216-809-11	METAL CHIP	100	5%	1/16W
R821	1-260-076-11	CARBON	10	5%	1/2W
R831	1-216-853-11	METAL CHIP	470K	5%	1/16W
R832	1-216-853-11	METAL CHIP	470K	5%	1/16W
R833	1-216-857-11	METAL CHIP	1M	5%	1/16W
R834	1-216-857-11	METAL CHIP	1M	5%	1/16W
R841	1-216-845-11	METAL CHIP	100K	5%	1/16W
R842	1-216-845-11	METAL CHIP	100K	5%	1/16W
R843	1-216-845-11	METAL CHIP	100K	5%	1/16W
R844	1-216-845-11	METAL CHIP	100K	5%	1/16W
R851	1-216-833-11	METAL CHIP	10K	5%	1/16W
R852	1-216-837-11	METAL CHIP	22K	5%	1/16W
R871	1-260-076-11	CARBON	10	5%	1/2W
R881	1-216-853-11	METAL CHIP	470K	5%	1/16W
R882	1-216-853-11	METAL CHIP	470K	5%	1/16W
R883	1-216-857-11	METAL CHIP	1M	5%	1/16W
R884	1-216-857-11	METAL CHIP	1M	5%	1/16W
R891	1-216-845-11	METAL CHIP	100K	5%	1/16W
R892	1-216-845-11	METAL CHIP	100K	5%	1/16W
R893	1-216-845-11	METAL CHIP	100K	5%	1/16W
R895	1-216-821-11	METAL CHIP	1K	5%	1/16W
R897	1-216-821-11	METAL CHIP	1K	5%	1/16W
R901	1-249-417-11	CARBON	1K	5%	1/4W F
R941	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R942	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R943	1-216-833-11	METAL CHIP	10K	5%	1/16W

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Ref. No.	Part No.	Description			Remarks
R944	1-216-821-11	METAL CHIP	1K	5%	1/16W
R951	1-249-417-11	CARBON	1K	5%	1/4W F
R952	1-216-833-11	METAL CHIP	10K	5%	1/16W
R955	1-216-853-11	METAL CHIP	470K	5%	1/16W
R956	1-216-853-11	METAL CHIP	470K	5%	1/16W
R957	1-216-833-11	METAL CHIP	10K	5%	1/16W
		< TRANSFORMER >			
⚠T1	1-437-760-11	TRANSFORMER, POWER			
⚠T51	1-437-761-11	TRANSFORMER, POWER			
		< THERMISTOR >			
TH1	1-803-806-31	THERMISTOR, NTC			
**********					
	1-684-940-11	SPK BOARD			
		**********			
		< CAPACITOR >			
C824	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C825	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C826	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C874	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C875	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C876	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN801	1-537-114-11	TERMINAL BOARD (SPEAKER)			
CN802	1-770-726-11	CONNECTOR, BOARD TO BOARD 6P			
		< DIODE >			
D892	8-719-988-61	DIODE 1SS355TE-17			
		< RESISTOR >			
R822	1-216-797-11	METAL CHIP	10	5%	1/16W
R872	1-216-797-11	METAL CHIP	10	5%	1/16W
		< RELAY >			
RY891	1-755-373-11	RELAY			
**********					

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
52	1-773-001-11	WIRE (FLAT TYPE) (15 CORE)	
109	1-693-529-11	TUNER (FM/AM) (AEP,UK)	
109	1-693-531-71	TUNER (FM/AM) (AUS,SP,MX,HK,TW)	
109	1-693-534-11	TUNER (FM/AM) (US,CND)	
109	1-693-538-11	TUNER (FM/AM) (KR)	
110	1-769-940-11	WIRE (FLAT TYPE) (11 CORE)(EXCEPT AEP,UK)	
110	1-773-004-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK)	
⚠112	1-769-079-11	CORD, POWER (KR)	
⚠112	1-775-790-51	CORD, POWER (AUS)	
⚠112	1-777-071-62	CORD, POWER (AEP,UK,SP,HK,TW)	
⚠112	1-783-531-31	CORD, POWER (US,CND)	
⚠112	1-792-382-21	CORD, POWER (MX)	
514	1-823-860-11	WIRE (FLAT TYPE)(23CORE)	
M102	X-4954-294-1	MOTOR ASSY, SLED (SLED)	
M701	1-763-790-11	MOTOR, DC (LO)	
M702	A-4735-611-A	MOTOR (CK) ASSY (CK)	

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REVISION HISTORY

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Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002.05	New
1.1	2003.12	Correction of the position of gear phase adjustment with CDM71 (SPM-03124)

SS-CEX5

SERVICE MANUAL

Ver 1.0 2002. 05

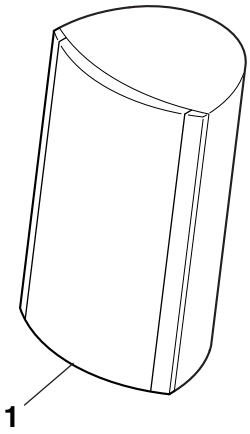
US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model

- SS-CEX5 is speaker system in CMT-EX5.

SPECIFICATIONS

Speaker system	2-way, bass-reflex type
Speaker units	
Woofer:	10 cm dia., cone type
Tweeter:	2.5 cm dia., cone type
Nominal impedance	4 ohms
Dimensions (w/h/d)	Approx. 160 × 235 × 150 mm
Mass	Approx. 1.4 kg net per speaker

EXPLODED VIEW AND PARTS LIST



Ref. No.	Part No.	Description	Remarks
1	A-4746-662-A	OVERALL ASSY	

SPEAKER SYSTEM

9-874-035-01
2002E1600-1

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Home Audio Company
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